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ADOLESCENT PHYSICAL TYPES. A PRELIMINARY STUDY[1]

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Differences of type were observed in antiquity. The drawings of the cave men (30) always represented the women as corpulent and the men as lithe, muscular and athletic. For at least 2,000 years a conscious division of the human race into opposing types has been made. Thus, Plutarch makes Caesar say in substance, "As for those fat men and smoothed combed heads, I never reckon of them; but these pale-visaged and carrion lean people, I fear them most." These words as later paraphrased by Shakespeare are worth noting as a graphic description of the mentality of what we today call the carnivore.

More recently, in the scientific world, President Hall (26) has stated that infant nature divides sharply into two types, the passive and the active—precursors, we may say, of those recognized in the adult by Caesar.

There are of course innumerable ways of classifying the human race. The philosopher has divided it into those in pursuit of truth and those in pursuit of happiness. The common man has settled the question in a most obvious way to himself by employing the terms, thin and fat, as one may witness in such nursery rhymes as "Jack Spratt and his wife." This

[1] This study was made in the department of Pedagogy and School Hygiene at Clark University. I wish to express my sincere thanks to Dr. William H. Burnham, under whose supervision the work was done, for suggesting the subject for investigation, and for his personal interest in the study.

is a sound classification, since it is an outward manifestation of structural differences which one may group under the heading of type.

"This may be illustrated more concretely," says Dr. Burnham, "by recent studies which have shown that there are different types as regards not only growth in height and weight and the grosser physical characteristics, but also as regards some of the most important organs of the body, different types as regards the digestive apparatus, especially the small intestine, conditioning different types as regards nutrition; again, different types as regards respiration, nervous mechanism," etc.

Let me quote in detail from President Hall's (25) Adolescence, Vol. 1, p. 13, as follows:

"There is a wide difference between a mean and a type. Children of the same racial stock, like, for instance, the tall Swedes, represent a type, as would the smaller Italians and the yet smaller Japanese, but the mean of the two races might find its analogue in an average between dogs and horses which would represent no individual. Every generalization of heterogeneous persons suppresses facts concerning individuals, and to seek a cause for every variation from an average is folly. A type, on the other hand, is a norm to which every individual in a really homogeneous group tends to approach or to vary from, and in a pure race the average persons should be most frequent, and around them others should be grouped closely as well as symmetrically. Any individual, although far from a miscellaneous average, may represent a type and illustrate some tendency away from the average in some new direction, or may even be a sport leading to a type. Still again, race, climate, poverty or riches, which are known to cause differences for the same age, would almost violate the law of social type; and the theory of least squares has suggested many more or less complicated and interesting modes of treating statistics to determine their real significance so as not only to present, as e. g., by percentile grades, but even to evaluate the different degrees of departures from the mean."

It is my purpose to discuss the three physical types in man. They are: (1) omnivorous, (2) carnivorous, (3) herbivorous.

1. The Omnivorous, intermediate, neutral or normal human type. There is little variation, writes Goldthwait (20), to be found in the work of anatomy in that which is called normal. The torso is of moderate length and breadth. The thorax is full and moderately rounded, the upper abdomen is rounded and in circumference about the same as that taken just above the nipple. The diaphragm is high and there is generous space under the ribs for the viscera. All of the

abdominal viscera, except the lower portions of the sigmoid and part of the small intestine, are above the umbilicus. Around the viscera and representing a definite part of their support are well-defined masses of fat. The lower abdomen is flat, while the upper abdomen is firm and rounded, there being no marked depression under or inside the edge of the ribs.

Of the special viscera, the stomach is pear shaped, and is placed well up under the ribs, occupying the uppermost part of the abdominal cavity upon the left. The small intestine is about twenty feet in length, is of good calibre and muscular tone. The large intestine of five or six feet in length (except transverse) is adherent to the posterior abdominal wall. In this type the posture, muscular function and nutrition are generally good.

Of the variations from the normal, according to Goldthwait (20) and Bryant (5), there are two well-marked types which are recognized and described as follows: 1. Carnivorous, narrow-backed, slender or visceroptotic type. The whole figure is lighter than normal, not only that there is less fat, but the skeleton is lighter and more slender in form. The skin is thin, soft, dry and delicate. The hair is more abundant in usual places and frequently shows on parts where it is not normally seen. The individual is usually either tall and slender or small and delicate. The head is oval and proportionately large, the face and jaw narrow.

There seems to be a difference of opinion regarding the size, position and shape of the ear. Bryant says that the ear is long, close set, F shape as seen from behind, and slants backward against the head. Goldthwait writes, the ears usually are large and prominent, projecting outward and forward.

The torso is longer in proportion and also narrow, the vertebrae are long and narrow; there are frequently six lumbar vertebrae instead of five as in the normal. The muscles are long and slender. Shoulders are drooped forward and narrow, chest is narrow and flat, abdominal cavity is small above and large below the umbilicus, visceral ptosis is frequent. The arms, hands, legs and feet are long and slender; the knees may be somewhat sprung with knock knee; the feet usually high arched and pronated, but often found low arched.

2. Herbivorous, heavy or broad-backed type. Upon the other side of the normal human type, and in marked contrast to the slender, narrow-backed carnivorous type, is the heavy built, broad backed type of human, in which many of the characteristics are similar to those found in the herbivorous creatures. In this type the body is built upon much heavier

lines throughout. The skeleton is larger in proportion, stronger and heavier in structure. The body as a whole is broad and relatively short. The skin is thick and moist with a scant or excessive growth of hair. There is an excess of fat throughout the body.

The head is round, the face is broad, the jaw is square and the ears, Bryant finds, are usually not large and projecting from the head. Goldthwait thinks the ears are placed flat against the side of the head. The neck is short and thick, the torso short and broad, the vertebrae broad and heavy, frequently there are only four lumbar vertebrae. The shoulders are broad and square, the chest is larger both in lateral and antero-posterior diameter than normal. The abdominal cavity is broad and deep. The legs are short and heavy, knees usually straight, may be sprung and knock kneed, the feet broad and low-arched, but often found high-arched.

Such, according to Bryant and Goldthwait, we may say, are the three general types which are common in the human family, and of the fact that they exist there can be no question if we notice a group of persons. The thin carnivorous person is there side by side with the broad full-faced herbivorous person, with the normal human also present, and the characteristics are so different and so distinct that not more than a glance is necessary to recognize the special form. The characteristics may be as apparent in childhood as in adult.

The types exist, writes Goldthwait (20), and in many instances the types are pure, the carnivorous being carnivorous throughout, the normal human being the normal human throughout; and the same is true of the herbivorous. In other instances, however, the types are mixed, and it is here that the greatest difficulty arises in classifying and understanding the needs of the individual. A carnivorous type in general build and viscera may have an herbivorous type of spine, a combination which is said to be quite common in women. A carnivorous type of stomach and intestine may exist with a normal liver and kidneys in so far as shape and position are concerned.

The neutral or normal type in general may have one or many of the characteristics of either the carnivorous or herbivorous types. The herbivorous type may show characteristics of either of the others and probably the most common variation in this type is the smaller spine and imperfectly attached colon, but of full length.

That such differences exist in the anatomic formation of members of the human family there can be no question, and it is not unreasonable to expect such differences if the biologic principles of the development of the race are considered.

The human being as the highest type of mammal naturally inherits something of the strains which have shown themselves in the various species through which the advance of the mammalian group has occurred, and it is only by studying comparative anatomy that the various differences of type can be understood.

Some scientific studies have been made, and among them Bryant's and Goldthwait's are most interesting.

Dr. Bryant (5) presents a classification of developmental influences, and I shall give it in substance and discuss it briefly as follows:

A. *Variations in Type Form.* Long since has it been noted that certain types of animals lived on meat and that others lived on a non-meat diet. Treves and many others, both before and after him, have worked on the developmental problem. From his study of evolution in 200 different animals, as illustrated by changes in the intestinal canal, he concludes: that evolution of the animal species largely depended upon food environment. He believes, judging man by his intestine from the developmental point of view, that he belongs between the carnivorous and herbivorous animals, and is more nearly related to the latter than the former.

From a biological standpoint, Bryant's (5) recent study of mankind considering nutritive idiosyncracy is most interesting and promises highly practical results. According to his theory, bodily form and intestinal length are correlated.

Consequently, he says, the race falls into three type groups, or the genus homo is divided thereby into three classes: (1) the carnivorous type; (2) the herbivorous type; and (3) intermediate or omnivorous type, the latter including individuals made up of the two factors in normal proportions and consequently healthy.

According to Dreike the relationship between body form and intestinal length has been traced as far down the scale of life as the reptiles and the insects.

More recently, Bean (2, 3) has distinguished three groups on the basis of the germ layers, and has not only been able to recognize them by body form and shape of the ear, but has made a rough classification of the diseases to which each type is subject.

Also, and with reason, writes Bryant, there have been many reports on the effect of the upright posture upon the viscera, a change which bears hardest upon the loose jointed, trumpet eared, carnivorous type of individual, since his loosely adherent viscera, so well adapted to his four-footed manner of life, work at a great disadvantage in his new attitude.

Goldthwait (20) has found that these type differences apply to the number and shape of the lumbar vertebrae no less than to the other components of body form.

Smith (33) has made an extensive study of enteroptosis in women and girls of various ages. He found certain characteristics present in enteroptotic cases and these correspond for the most part with those associated with the carnivorous type of individual.

Williams' (34) characteristics of the ptotic figure correspond with those of the carnivorous type.

In brief it may be said the carnivorous type has a long body form and a relatively short intestine; the herbivorous type has a wide, short body form and a relatively long intestine. The omnivorous or neutral type is of course less sharply defined.

In man, the intestine is of intermediate character, nearer to the carnivora than to the herbivora, but here also one finds extremes of difference in intestinal length amounting as in the lower animals to at least 100% at a given age or height.

B. *Variations Common to all Types.* In this group belong many variations of the viscera:

1. Abnormal persistence of normal fetal structures.
2. Alterations in development of normal fetal structures: (a) Arrest of development. (b) Excessive development.
3. Absent development and malformations.

C. *Variations in the Development of the Ductless Glands.*

1. Metabolic disturbances. (a) Organic. (b) Inorganic.
2. Trauma.
3. Other causes.

Under the discussion of diatheses Bryant (8) quotes from Paton's book on "Regulators of Metabolism," stating the three chief influences concerned were grouped concisely as follows:

1. Hereditary Inertia or Inherited Developmental Tendencies.
2. The Nervous System.
3. The Chemical Products of various Organs, and so-called Internal Secretions.

Bryant thinks of these three factors the third doubtless comes to occupy the most prominent place in post-embryonic or certainly in adult life. There is some evidence to show that within limits the activities of these glands may be varied by persistent attention to diet.

There is less known about this latter group than about the other two, but that the effects of varied diets upon the de-

velopment and activities of the ductless glands is of real importance, with the resultant possibilities of alterations in function of the whole organism.

Bryant (7) states, among the facts in comparative anatomy which may be taken as proved by work recorded by others given in his literature, may be mentioned the following:

1. Body form influences intestinal length, regardless of food habits.
2. Intestinal length varies with the species, regardless of food habits.
3. In a given species intestinal length may vary 100%.
4. This variation depends chiefly upon the digestibility of food.
5. Offspring of one mother have at birth approximately the same intestinal length.
6. In a given adult individual of one species, body form and intestinal length are dependent chiefly upon heredity, the form or digestibility of food presented during the growing period and the general habits of life. Sex plays an almost negligible part in this regard.
7. The carnivorous and herbivorous habit is not obligatory. Animals predisposed by their species to one or the other of these extremes of food habit, may within wide limits when forced by necessity reverse their normal manner of life.
8. In the group of mammals, the carnivora are distinguished by a long thin body form, and a short simple type of intestine in which the small intestine is markedly longer than the colon. The herbivora, on the other hand, present a marked contrast; the body form is short and thick and the intestine long and complex, with the small intestine perhaps barely equal in length to the colon.

President Hall in his lecture course on the "Psychology of Glands and Secretions," says in substance:

1. Man is the greatest of all wanderers and most omnivorous. He gradually developed from an herbivorous to a carnivorous type of being.
2. Animal food became acceptable rather early.
3. Change to animal food led to shrinkage of the alimentary canal.
4. Passage from vegetable to animal food made great increase in intelligence.
5. The alimentary canal is the best field for the study of the secretions, it being the same area as the whole skin in man, one-half as much in the dog which is carnivorous and twice as much in the horse which is herbivorous.
6. The total effect of cooking has been to make man more vegetarian than carnivorous.

7. Insectivora follow insects in development and are the first carnivora.

Goldthwait (20) in his essay presented a valuable summary of present knowledge of type, the results of his own observations and those of others, under the title of "An Anatomic and Mechanistic Conception of Disease."

He has called attention to the fact that human beings are not of one type and one structure, and that there are many variations in the formation of the viscera and skeleton, as well as to the peculiarities of the particular functions. In his recent investigation of the different anatomic types, he says, it soon became evident that, first, the anatomic formation described in the text-books as normal or so-called normal type of human being rarely exists in the individual having the common chronic disease; second, the variations from the normal group themselves into two general types from which again there are many variations, but that if the original type is appreciated the variations from it are easily traced and understood.

Type Characteristics. "Given the presence of the two human types in one locality," writes Bryant (8), "what may be expected of them?" His reply: "History provides abundant answer. Thus in England the square-jawed Roundheads under Cromwell stirred up the country for a few years and disappeared. The hatchet-faced Puritans found England too crowded and settled a new world. To-day the hawk-nosed bird-men rule the upper air. The carnivore is the restless pioneer, inductive, dying ever on the outskirts in search of something new."

"The herbivore is the sedentary stabilizer, deductive, ever at his appointed task. Both are necessary to the progress of the world, and neither can do the work of the other. It seems unlikely that the human species will ever be reduced to one type, but should this come to pass one might hazard a surmise that the surviving type would be a mixed one, perhaps three parts carnivore and one part herbivore."

The editor of the Boston *Medical and Surgical Journal* (15), in a sympathetic discussion of Dr. Bryant's first paper, states "a classification or differentiation of human types seems of interest from an evolutionary point of view, since probably both types represent diverse lines of development from lower animal forms, etc. Racially the carnivorous type is more active, energetic and dominant; the herbivorous type more stable, artistic and contemplative. Each has the advantage and dangers of its characteristics. The herbivorous type tends to survive by virtue of its stability, the carnivorous by its superior energy and versatility. On the whole, it would ap-

pear as though in the history of the world, progress has been achieved chiefly by successive carnivorous races which finally perish, falling victims to their inherent defects, and are replaced by the evolution of new carnivorous types from the herbivorous substratum. Probably the carnivorous is usually superior, though it encounters peculiar perils in maintaining that superiority, and as a matter of fact it appears, certainly in the majority of American communities, that the carnivorous type predominates. This is evidenced by rapid evolution, in the second and third generations, of carnivorous types out of immigrants of herbivorous types from European countries. Whether this is solely a result of diet or climate is not wholly clear."

Sex and Type. Another aspect of possibly considerable significance in the consideration is that the origin of the somatic types are, to certain extent, sex types. To continue from the editorial previously referred to, the editor (17) believes the fundamental feminine type is herbivorous, the fundamental masculine type carnivorous. Whether this differentiation originally proceeded from occupation is not certain, but seems definitely likely. The man adapted to the limit acquired height, strength and leanness essential for speed and thus became carnivorous; the woman, adapted to more sedentary domestic occupations, remained herbivorous."

Bryant (8) agrees that there can be no question that in the human species the female tends toward the herbivorous and the male toward the carnivorous type. He writes, "Doubtless, as among the American Indians, the influence of the chase and of the meat diet worked in one direction in the men, and the sedentary habits, hard muscular work, and carbohydrate diet of the squaws was active in the other direction; meat and wilderness, civilization and cereals are synonymous."

It is thought that perhaps the most striking fact of all is, that in the course of evolution, as these types have tended to appropriate a common mean, with the progress of that form of evolution which we call civilization, the masculine type has tended to become more feminine and the feminine type more masculine.

It is especially notable that the short, rotund, typically feminine type is disappearing before the predominance of women of tall, slender, more masculine physique. Between the masculine woman and the femininized man there remain, of course, fundamental skeletal and other differences, but the sex types are not so widely diverse as they probably were in remoter times. It is, of course, impossible to foresee what may be the ultimate course of reciprocal evolution between

the carnivorous and herbivorous types. Ideally it should lead to the evolution of a standard human type, in which, as the sexes approach each other, they should be mutually benefited anatomically, physiologically and intellectually. Probably such an ultimate ideal type would be largely a persistence of the carnivorous form by constant absorption from the herbivorous substratum of its mental and physical merits, without its defects. In the lower animal kingdom the ultimate dominance of carnivore over herbivore seems established. Such is the story of the past, as written in the chapters of biology. Such, or somewhat similar, may be expected to be the future story of man as written in the later chapter of human evolution.

Individual and Type. Another point should be noted, that is, in the study of the students representing the various adolescent physical types it is almost impossible to isolate a type as belonging to only one group. There are many individual and wide variations in physical as well as mental and other types. Any individual may belong to one type or the other or anywhere between them.

Drs. Goldthwait and Bryant have shown that the types are pure, i. e., the carnivorous being carnivorous throughout, etc., but also say more often the types are mixed. Their observations show that there are wide variations in the formation of the viscera and skeleton, also various peculiarities in the formation of the viscera.

Anatomic variations from the normal structure of the bones of the sacroiliac and lumosacral regions are very common. An abnormal formation causes scoliosis. Relaxed ligaments produce a defective balance of the whole body. Insufficient muscular function will be largely responsible for incorrect posture. For practical purposes this question is of utmost importance to hygiene, as each type has its own needs, etc.

It is most interesting to note that the views advanced regarding types in man, however, have not passed unchallenged. Dr. E. A. Hooton (27), an anthropologist, in criticism of the theories developed by Dr. Bryant and Dr. Goldthwait, writes in substance, as follows:

"There are very grave anthropological objections to an arbitrary classification of man based on one or two anatomical characters, when the classification disregards racial differences, heredity,—changes due to adolescence and old age, and the entire zoological background of man's ancestry."

He claims that in order to establish an anthropological type it is necessary to combine the results of extensive morphological observations with measurements on long series of subjects. The evidence of the existence of such a type must then be presented in concrete statistical form, and if possible

a mathematical correlation between the associated characters demonstrated. He then produces evidence of such nature that he cannot believe in the existence of the "carnivorous" and "herbivorous" types of man. He shows that there is no constant relation between bodily fullness and stature, concluding that while the attempt to bring anthropology and medical science in a working partnership is laudable, the theory of "herbivorous" and "carnivorous" types of man falls to the ground because it is based largely on incorrect anthropological assumptions.

It is perhaps of interest in connection with the anthropological aspect of the subject to call attention to the editorial (18) in *The Lancet* on the subject of race types in man, particularly with reference to the mixed and complicated ethnological conditions of the races of Europe.

The writer states: Europe is at most divided between two or three strata of races—the dolicocephalic or long-heads, the mesocephalic or short-head, and brachycephalic or square-head.

It may be taken for granted, we assume, that these types roughly correspond to the carnivorous, normal and herbivorous types referred to by Dr. Goldthwait and Dr. Bryant.

It seems the types exist side by side in nearly all the European races and are, perhaps, to be regarded as representing individual rather than racial evolutionary phenomena. In any event, this comment upon race types in man in European countries should have a value in the discussion relative to the anthropology of carnivorous and herbivorous types.

Dr. Goldthwait (21), in his article replying to Dr. Hooton, says: The study of the average, or the composite, of any group will not explain the variations from that composite which may be present in the individuals of the group. The work of the anthropologist, as is true of the teachings of the works of anatomy, has been based upon the study of groups of individuals and the deductions represent studies of the average formed from these groups.

This makes it possible for Dr. McKenzie to model his beautiful figure of the athlete, but it does not help the many individuals who are formed so very unlike the ideal figure, and whose peculiarities are lost in the composite study of the whole.

To appreciate the differences or departures from type, one must study the individuals of the special race and not try to contrast the people of different races and expect to get much practical help from that. It is by comparing the individuals of one race that real progress will be made, and not

comparing of the average type of one race group with the average type of another race.

Dr. Bryant (9) in his last article gives a summary of his former papers and then makes a direct reply to Dr. Hooton's article according to the serial number of its paragraphs, concluding that Dr. Hooton's objections do not appear to be sufficient to overthrow the theory of type which has been presented.

Account of Investigation

Examination: In connection with the annual anthropometric examinations of the boys of the Freshman class in the Worcester High Schools (28), I attempted to make a preliminary study of adolescent physical types. As my study was concerned with type, no attempt was made to make a special study of anthropometric data beyond reckoning general averages.

Unfortunately the time allotted for the examination was limited and the facilities inadequate; the results, therefore, are far from being satisfactory, but under the existing conditions it was difficult to do anything more at that time than to make a rough classification of types, with the more important associated characteristics and to prepare such data as will be helpful in further study. No doubt photographs would have been helpful and Roentgenographic study of the spine and gastro-intestinal tract disclose much valuable information, but this was impossible.

Inspection: The boy was placed in the best available light, so that the various characteristics could be brought to notice. Standing in a natural position, arms at side, weight equally distributed on both legs, the body was viewed from the front, side and rear, noting the characteristics of the type, posture, symmetry and general contour.

A consideration was given to the relation of height, weight, lung capacity and measurements to his age.

At this time the history card, which had previously been given the boy to be filled out under the direction of a parent or guardian, was consulted. Questions were asked regarding diseases of childhood, especially rickets, the heart, lungs, pleura, kidneys, rheumatism, etc.

The characteristics especially observed were the following:

a. *Size:* Whether tall and slender, small and delicate; or large and heavy build.

b. *Skin:* Whether thin, soft, delicate, pigmented and dry, or thick, coarse, firm, and moist.

c. *Head:* Whether long or round.

d. *Ear:* Whether large or small and if projecting, or flat against side of head.

e. *Face:* Whether narrow or broad.

f. *Jaw:* Whether narrow or square.

g. *Chest:* Whether narrow and flat, or large and round.

h. *Shoulders:* Whether narrow and round, or broad and square.

i. *Abdominal Cavity:* Whether small above umbilicus and large below, or large and round.

j. *Arms and legs:* Whether long and slender, or short and heavy.

k. *Muscles:* Whether long and slender, or large and thick.

l. *Knees:* Whether knock-kneed and sprung, or straight.

m. *Feet:* Whether slender, pronated and high arched, or broad and flat footed.

Posture: Whether good, fairly good, fair, or poor.

Physical Defects: Osseous deformity evidencing rickets, kyphosis, lordosis, prominent abdomen (visceroptosis), scoliosis—with its usual characteristics of shoulder low and hip prominent, knock knees, bowlegs, pronated, high arched and flat foot.

Muscular function: This was determined by the general tone of the muscles and tension on contraction.

Nutrition: This was determined with the muscular condition and by appearance of general nourishment, skin, mucous membranes, etc.

Mouth: General condition of tonsils, teeth, etc.

Beside recording the usual anthropometric measurements and tests, note was made of the type, posture, physical defects, muscular function, nutrition, teeth, etc.

In making observations or comparisons, it is essential that one should have a standard. The table presented by Dr. Bryant in his initial paper showing parallel characteristics of the carnivorous and herbivorous types by corresponding contrasts in nearly every detail of anatomy and physiology, and the description of the types as presented by Dr. Goldthwait in his paper, entitled "An Anatomic and Mechanistic Conception of Disease," were used for the most part in his investigation.

Observations show that in several instances the types are pure. The carnivorous are carnivorous throughout, the normal are normal throughout and the same may be said of the herbivore.

Yet in many other instances the types are mixed and it is here that the greatest difficulty arises in classification. A carnivorous type in general build may have a head and face of a neutral or herbivorous type. Many neutral types are

found with few carnivorous or herbivorous characteristics. Again, herbivorous types may have a carnivorous head and face, or some characteristics of the normal types.

The typical carnivorous type presented characteristics of a more or less degree somewhat as follows: He was either tall and slender or small and delicate, with a long narrow face and jaw. His trunk is long and narrow, legs and arms, as well as muscles, are long and slender. In several cases there are round and narrow shoulders and flat chest. Often there is knock knee with pronated, slender and high arched feet, the skin usually being thin, soft, delicate, pigmented and dry.

The typical herbivorous type present characteristics of a more or less degree somewhat of this sort: He was rather large and heavy built, with a round head, broad face and square jaw. His trunk short and broad, legs and arms short and heavy, muscles large and thick. Usually the shoulders are broad and square, the chest large and round. Knees straight, but marked knock knee is often found, feet broad and flat. The skin is thick, hard, firm and moist.

In accordance with Drs. Bryant and Dunham the carnivore seem to be quick acting, quick eating, high-strung individuals with a slow pulse, low blood pressure and subnormal temperature. This type is inductive, a high compression organism with a corresponding high peak of efficiency, but limited capacity for long sustained effort. He is an inferior or highly specialized type, in which the only systems developed and remaining present in excess are those necessary for the perpetuation of the species—the central nervous and reproductive systems.

On the other hand, the herbivore is deductive, represents a low compressive type of engine with lower maximum efficiency, but a more sustained plateau of possible effort.

In athletics also the appreciation of the different physical types is clearly understood.(20) The hurdler or the runner is usually of the normal or slender type, while the hammer thrower, the shot putter or the wrestler is usually of the heavy type. The heavy men are usually found in the line of the football team, while in the backfield the more slender and agile persons are found.

Results: Following the method described above, the 547 boys examined are classified according to type as follows:

A. Total Carnivorous.....329 = 60%
C + 76 = 14%
C 97 = 17.5%
Mixed C 156 = 28.5%

B. Total Neutral..... 46 = 8.5%
C. Total Herbivorous.....172 = 31.5%
Mixed H 91 = 17%
H 39 = 7%
H + 42 = 7.5%

The results show that 329 or 60% of the 547 boys examined are of the carnivorous type; 46 or 8.5% are of the neutral or omnivorous type, and 172 or 31.5% are of the herbivorous type. The carnivorous group is again divided into three classes: 1. a group in which there was every evidence of the carnivorous type; 2. a group in which the carnivorous characteristics predominated for the most part and many that could be called straight carnivora except for the head, which was either of the neutral or herbivorous type. 3. Here we have a group to be subdivided: (a) those in which the characteristics were more than one-half carnivora and the others of the herbivorous type; (b) a group that may be called neutral minus, of which there were 87 or 17% of all carnivora. These were most difficult to classify; they were of the neutral type in general with a few characteristics of the carnivora. It is a question with me as to whether the pubertal spurt will not, with a year or two of growth and development with proper nutrition, exercise, etc., bring many of these boys nearer the neutral group.

Yet Dr. Bryant believes, in answer to the question as to the influence of the pubertal spurt upon types, that "As there is an active growth period after puberty, it would appear probable that the trend would be toward the carnivorous side —i. e., that herbivora would tend toward normal and that normals tend to become more carnivorous, the carnivore becoming carnivorous +." This, of course, he says, is merely a suggestion not founded on fact.

On the other side of the neutral type we have the herbivorous group which may also be divided into three classes:

1. A group to be subdivided: (a) we have another very interesting class which may be called neutral plus—there were 51 or 8% of all herbivora. Here is a normal type with possibly legs of the herbivorous type. It is my opinion that the minus and plus neutrals, especially the former, decidedly raise the standard of the carnivorous and herbivorous types in the results. (b) A class in which the predominant characteristics were of the herbivorous type. 2. A group in which there was an herbivorous body and a head of the neutral or carnivorous type. 3. A group of undoubtedly straight herbivora.

A classification of types according to chronological ages may be briefly given as follows: Ages range from 11 to 19

years. 484 or 88% were between 13 and 15 years inclusive. The 298 carnivora were divided into 75-13 years, 141-14 years, 81-15 years. The 38 neutrals were divided into 10-13 years, 12-14 years, 16-15 years. The 149 herbivora were divided into 30-13 years, 76-14 years, 43-15 years. The remaining 53 or 12% were: 11 years—1 herbivore; 12 years—11 carnivores and 3 herbivores; 16 years—13 carnivores, 7 neutrals and 12 herbivores; 17 years—6 carnivores, 1 neutral and 7 herbivores; 18 years—1 carnivore; 19 years—1 carnivore.

The following table gives the age, height, weight and lung capacity of the types showing contrast:

	Carnivorous			Neutral			Herbivorous		
	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
Age (yrs.)	19.2	12.7	14.2	17.0	13.0	14.7	17.8	11.6	14.7
Height (ins.)	69.6	49.7	60.7	69.7	55.3	63.5	72.5	54.6	63.0
Weight (lbs.)	147.0	62.0	91.4	150.0	75.0	107.0	206.0	70.0	113.0
Lung capacity (cu. ins.)	250.0	94.0	157.0	270.0	110.0	178.0	276.0	100.0	178.0

Nationality. Four hundred and sixteen or 76% of the 547 boys examined were of four nationalities: American, Swedish, Irish and Hebrew. These were divided as follows: 254 or 46% were of the carnivorous group, 33 or 7% of the neutral group, 129 or 23% of the herbivorous group. The carnivore were divided: 126 or 50% Americans, 48 or 19% Swedish, 48 or 19% Irish, and 30 or 12% Jewish. There were as many Americans as the other three together. The neutrals were divided 22 or 66% Americans, 4 or 12% Swedish, 3 or 10% Irish, and 4 or 12% Jewish; again as many Americans as other three together. The herbivore were divided: 52 or 40% Americans, 40 or 30% Swedish, 24 or 20% Irish, and 13 or 10% Jewish. Nearly one-half as many Americans as the other three combined. The remaining 131 or 24% of the whole may be divided somewhat as follows: 100 or 18% are of 14 nationalities. Of these 49 were carnivora, 13 neutral and 39 herbivorous types. The other 31 or 6% represent eleven mixed nationalities; of these 27 were carnivora and 4 herbivora.

Two hundred of the 547 boys were of American nationality. They were divided into 126 or 63% carnivora, 22 or 11% neutral, 52 or 26% herbivora.

Considering the four high schools from the point of view of type, nationality and social status, it may be said, that North High School presents 50% carnivora, 10% neutral and

40% herbivora, out of 93 boys. In the other schools the proportion is two carnivores to one herbivore.

Worcester, as you know, has a decidedly large population of foreign birth. North High School presented boys largely from American and Swedish parentage; South High about 50% American; Classical and Commerce mostly a heterogeneous or miscellaneous group.

The boys at the North and South High Schools come mostly from the professional and business classes. Those at the Classical and Commerce largely from business and laboring classes.

Another point should be noted: In speaking of these human types, Bryant says: "It is to be understood that not only may races vary as to type in general, but that both types occur in varying proportions in every race. Consequently, an accurate reference to type assumes a comparison upon the basis of a given sex, a given age, and perhaps a given height, within a given race, or between races. Variations with age in a given individual always occur and are known factors. Hence the necessity for comparison at given age periods, if accuracy is aimed at in the study of type."

The history of diseases, as recorded on the cards, shows that headache, measles, scarlet fever, pneumonia, pleurisy, tonsilitis and convulsions occurred about three times as frequently in the carnivora as in the herbivora. This point will be discussed in a later section—the significance of type to the medical profession.

My statistics indicate, first, that *good* posture, muscular function, nutrition and teeth are correlated with the neutral or omnivorous type; second, that *fairly good* posture, muscular function, nutrition and teeth are correlated with the herbivorous type; third, that incorrect posture, physical defects, prominent lower abdomen (visceroptosis), insufficient muscular function, poor nutrition, defective teeth and rickets are correlated with the carnivorous type.

Bryant thinks nutrition is apparently in some degree related to the narrow chest, since it is always good in cases with a normal thorax and usually bad in proportion to the narrowing of the chest in the other cases.

In general the boys of the carnivorous group are weak, poorly nourished, lacking bone and muscle resistance in addition to having incorrect posture. Often the history shows diseases and other defects which greatly reduce the vigor and health of the boy, decrease his resistance to abnormal and long continued strain and predispose him to spinal curvature, and the like.

Subsequent examinations of 100 boys entering in February,

1916, were made, in which, besides the former method described, note was made of the stage of pubescence.

This table shows classification of types according to chronological and physiological ages.

	Age	13	14	15	16	17	Total
C 68	prepub....	10	11	1	..	..	22
	pub.....	14	13	2	..	..	29
	postpub...	3	6	4	3	..	16
N 10	prepub....	1	..	..	..	..	1
	pub.....	..	1	..	..	..	1
	postpub...	..	3	2	3	..	8
H 22	prepub....	..	2	..	..	..	2
	pub.....	7	3	1	1	..	12
	postpub...	1	1	2	4	1	9
100		36	40	12	11	1	100

Seventy-six per cent of the boys were of four nationalities: American 35, Hebrew 20, Irish 12, and Swedish 8. 19% represent ten nationalities and 5% mixed nationalities.

There was about the same difference between the carnivorous and herbivorous types in age, height, weight and lung capacity as in the former examinations, as were posture, nutrition, muscular function, etc.

More recently, in the latter part of March, another 100 examinations were made of boys who attended the gymnasium regularly since last October. These boys were all of the first group of 547 examinations. While all the methods of the former examinations were used, especial attention was given to see if there was a correlation between type and physical and mental activities.

A classification of types according to chronological and physiological ages is as follows:

	Age	14	15	Total
C 60	prepub.....	10	4	14
	pub.....	13	11	24
	postpub.....	4	18	22
N 11	prepub.....	..	..	..
	pub.....	1	..	1
	postpub.....	6	4	10
H 29	prepub.....	1	1	2
	pub.....	8	5	13
	postpub.....	9	5	14
100		53	47	100

These results, although the number is rather small, correspond with Dr. Bryant's findings, especially the early pubescence in the carnivora.

Seventy-eight per cent were of four nationalities: American 33, Swedish 19, Irish 16, and Hebrew 10.

Again, there was about the same difference between the carnivorous and herbivorous types in weight, height and lung capacity as in the previous examinations.

The posture, nutrition, muscular function, etc., correspond with the results of the former examinations.

There seemed to be a direct correlation between physical and mental activities in all types. The best marks for study and physical training were found in the neutral group. These were only three fair grades in study, and all grades good or excellent in physical training. 70% of the herbivorous type have good or better grades in physical training and about 30% good in studies. 50% of the carnivorous type have good or better in physical training and about 30% good in studies. There were no failures in studies in the neutral group, two in the herbivorous group and eight in the carnivorous group.

Invariably the boys with poor marks in studies were poor in physical training.

Dr. Bryant reports an investigation, made at his suggestion, by Dr. Hodskins at the Monson State Hospital, illustrating the use of types as applied to the study of a given disease, regardless of race.

Dr. Hodskins examined 115 epileptic children. In round numbers, about 55% were so-called normal, but on either side of this group there were found 5% herbivorous, and 40% carnivorous, or eight carnivores for every herbivore. This, says Dr. Bryant, is certainly a strong leaning toward the carnivorous side of the scale. The article further deals with etiology and type.

Dr. Bryant thinks humanity in mass changes its type, to a certain extent during life. But at different ages it will be found that different individuals change to different degrees. Puberty, for example, comes earlier in the carnivore than in the herbivore, regardless of race or distance from the equator.

In a personal communication from Dr. Bryant, he says: "A healthy baby from 1 to 5 years or so is fat and of the herbivorous type. This is universal. The period of growth usually lasts to 25 years and the growth of legs is after 10 years. Longitudinal growth is a carnivorous tendency. It has been shown that on a poverty ration, longitudinal growth is the last thing to disappear in the way of development. Hence the carnivorous type is common in the London slums. When growth has stopped, the body tends to fill out sideways

—this is a herbivorous tendency and lasts probably for 30 years or until one is 60 years old. Beyond this functions tend to fail, activity and food intake are reduced and fat decreases, i. e., this again being a carnivorous tendency. (A fat herbivorous type 90 years of age is very rare.)

There are general tendencies, aside from the fact that the carnivora outlives the herbivora and thus becomes more prominent after 60 or 70 years of age. Of course, in the young a carnivorous + individual is less herbivorous in type for age and sooner shows his real type in the growing period.

Briefly, he says, from 1 to 5 years we have the herbivorous type; from 5 to 25 years carnivorous type; from 25 to 60 herbivorous types, and 60 to 90 again the carnivorous.

Again, for a word of résumé, permit me to repeat that this is a preliminary investigation. I report it as suggesting rather than demonstrating results.

Often I spent considerable time in deciding on which side of the neutral a boy should be placed, for when a type is decidedly evident there is little difficulty in classification.

Thus, my investigation shows, in a word:

1. That there are among 547 Freshmen High School boys, three different physical types.

2. That the carnivora predominate, i. e., 329 or 60% are carnivorous or of the long, thin, slender type. That 172 or 31.5% are herbivorous or of the broad, heavy type. That 46 or 8.5% are of the neutral or normal type.

3. That there is a marked contrast in age, height, weight and lung capacity, between the carnivorous and herbivorous types.

4. That among Americans the carnivora seem to predominate. Many of these Americans are of foreign descent.

This latter finding is in accordance with the statement that carnivorous types develop out of herbivorous types from European countries.

While it is true this was a selected group, the study was made of all present at the beginning of the course, in the four high schools, without any artificial selection.

Again, the fact that such type differences are found in such a homogeneous group, emphasizes the presence of type differences, which because of the homogeneity of the group will be reduced to a minimum.

Thus we may see that the problem of the adolescent physical type is a complex one. I have attempted merely to make a slight contribution toward its solution. For many centuries human types have been recognized, but only recently has the appreciation of type been made possible through persistent study and careful research.

In a future study I hope to investigate a group, where all are of American nationality and study intensively the different types as found in such a group.

The Significance of Type

For Hygiene and Posture: "The way the body is used," says Goldthwait (20), "is of quite as much importance as the structure of the body itself. Either type has the potential of good health if rightly used, but each has an equally definite potential of disease if the proper relationship between the many parts is not preserved. With the normal type, it is naturally easier to maintain this relationship, but the possibility of not maintaining it is apparent as one goes among one's fellow men."

Moreover, Goldthwait (2) says, "Since the pathologic changes which are seen are apparently due very largely to this imperfect adjustment of the parts, it is of the first importance that the postures or special elements of maladjustment peculiar to the different types should be appreciated." "It should also be remembered," he says, "that with the chronic patient, the large majority of the cases fall into the slender, congenital visceroptotic type or the broad, herbivorous type."

The importance of the proper relationship of the parts should be borne in mind under all conditions, and especially at the times of occupation, or when the postures are assumed for continuous periods. It is under such conditions that naturally the greatest harm results, and it should be remembered that irrespective of the type, the postures which are assumed as the body is used determine very largely whether the individual is to be well or ill. The most perfect, anatomically, may have the poorest health, while the most imperfect, anatomically may have good health, posture being the determinant.

Good posture is correlated with the normal or neutral type and suggests normal vigorous health. The postures which are assumed by the other anatomic types are perfectly characteristic, the posture itself very largely indicates the type of anatomy to be found in the individual. Fair posture has been found correlated with the herbivorous type and incorrect posture with the carnivorous type.

Many of the carnivora think they are in good health and no doubt they are in the ordinary meaning of the term, since they are up and about at their work. Many are anemic, poorly nourished, have digestive disturbances, are muscularly weak and perhaps more or less nervous.

This type improves markedly under a regime of hygiene and physical training.

Dr. Goldthwait (20) showed in the Shattuck Lecture, with the aid of pictures, how much depends on the postures of the body and how individuals carry themselves. He dwelt on the cases in which, owing to peculiarities of type, the tissues and organs interfere with one another, and urged the right use of the body as a means to the utmost degree of physical health.

He pointed out that the slender type of individual, with its fine potentialities and yet liability to disease, is now being saved by our preventive medical science, where formerly it died off.

"That type," he said, "is the most prolific and unless something is done the children will be weaker than the parents, and we shall get a weaker instead of a stronger strain in the race. That type is becoming more common and it offers an opportunity to the hygienist, physician and educator.

"We ought to carry on such a system of hygiene and education as will develop that type into the splendid body it is capable of becoming. A great task confronts us—to take that sensitive organization and give it a physical basis adequate to its support. Some day there will be as much emphasis placed upon the way the body is used as the way in which the mind is used."

Bryant (8) writes, "Once upon this earth, man lives his allotted span by consent of his intestines and what he puts into it."

Again, he says, "Assuming that the observations on the types are correct, why are they of interest to the clinician?"

He answers: "It is my understanding that the clinician is concerned with the control of disease, and of errors of body form, and if possible with their prevention. There then presents the double opportunity of exerting this control in the growing child, and to a less extent in the adult, through both physical and dietary regimen."

It seems to me this whole matter has the same relative importance to the hygienist.

Bryant (8) gives the following chain of circumstances, as suggestive of dietary control. It is known that:

1. The descendants of European immigrants tend to become of more and more carnivorous type on residence in America.
2. A meat diet favors growth of cancer.
3. Intestinal cancer is greatly on the increase.
4. The so-called stresses of modern life favor the growth of insanity.

5. The carnivore is the chief sufferer from cancer, insanity and tuberculosis, to mention only three destructive disease groups.

6. It is known that type or body form can to a large extent be controlled by the character of the food provided for the growing organism after birth.

In accordance with Dr. Bryant, I think there is positive evidence that this is a problem to-day, that this carnivorous type with its admitted potentials for good and bad is really on the increase.

Dr. Bryant (8) presents the question—"How may this circle be broken?" His answer with which I agree—*Secondarily*, by attention to postural and other exercises tending to prevent the too excessive development of the growing child toward the carnivorous type; *primarily*, by trying to habituate the intestine of the child to a diet composed not so much of eggs and meat, as of the less digestible and incidentally more economic vegetable foods.

This will not, at first, be an easy task for the doctor, hygienist or parent and may not be too agreeable for the young child, but all experience goes to show that the human intestine is very adaptable, and it would seem to be the part of wisdom and foresight to try to check the present tendency in this country of development toward the carnivorous type, by advocacy of a diet calculated to offset, to some degree, the too carnivorous trend of the coming generation.

The importance of the ductless glands is being realized. Their control surely lies primarily in diet: for example, without calcium available in diet, the glands controlling calcium metabolism must work in vain and slowly atrophy. Some such question as this must lie back of the clinical observation that bad teeth and atrophic arthritis occur chiefly in carnivores, while the herbivore with normal excess of calcium in the organism has good teeth and is prone to suffer from the hypertrophic type of arthritis.

Meat and hyperthyroidism, vegetables and hypothyroidism, problems of gastro-intestinal and in circulatory diseases, all seem to point in the same direction, says Bryant (8) and illuminate the one word *diet* as the key to control the type; and if the type, consequently the diseases to which a given type is by its anatomy and physiology predisposed.

Bryant (8) postulates one possible conclusion. A correct understanding of the possibilities of dietary control, in its relation to control of the ductless glands, of disease, and of body form itself as comprehended in the word type, must soon be recognized as one of the most vital assets of preventive medicine.

Bryant (4), in an extended study and investigation in clinics and post-mortem rooms in Europe and more recently in the children's department of the Massachusetts General Hospital, on the "Poor Health in the Child. Some Developmental Influences and their Importance to the Adult," writes as follows:

"My belief in the importance of the pediatric end of this developmental problem results from post-mortem work upon the adult, for it soon became evident that many of the peculiarities found in adults could also be demonstrated in children, in infants, and often even in the fetus. In such a case, it is obvious that the primary problem lies not in an adult, but in the child or infant in whom this adult has his origin; conversely, it has seemed probable that many an adult could have been spared years of misery and inefficiency, and have had much added to his productive power by adequate attention during his period of growth."

"The world is full of people who from the point of view of the efficiency expert are below par; who as hypo-producers and often as hyper-reproducers become to a variable degree a burden upon the resources of others. Having excluded such extraneous causes as alcohol, syphilis, hookworm and faulty habits, there will remain many cases for whom some other explanation than a neurosis must be found. Of these many may be traced to demonstrable physical defects. But it is not enough to call the sufferer bilious, or weakminded, or tubercular, or rheumatic; for constitutional differences largely determine the diseases to which the individual is liable. Tuberculosis is a marked example of a disease which thus becomes a symptom by which we may state the developmental type of its victim.

Quoting in substance from Bryant's conclusions of his study on "Poor Health in the Child":

1. Adhesions, ptoses, and other demonstrable physical defects are of common occurrence at all ages in both sexes, but the frequency of these defects in the adult is *not* markedly greater than in the child.

2. It is not improbable that such defects may stand in causal relation to some at least of the disabilities of the child and the adult.

3. The treatment of developmental defects is primarily non-surgical, and if properly carried out in the child is preventive, in that it will result in creating an adult not only personally more efficient, but one who may entertain the hope of having physically more perfect children.

4. The problem is comprehensive enough to accept all as-

sistance it can through habits, regulations in diet, and gymnastics.

In accordance with Dr. Burnham (10), I believe that while with our present knowledge we cannot determine the chief types satisfactorily it would soon be possible with a thoroughgoing health examination at school entrance to determine the different physical types and different mental types in such a way that the work of the school and the care for the hygienic welfare of the child could be made intelligent from the start.

The different types are liable to special diseases and to special defects. One type is tuberculous, another neurotic, another is the type of Bright's disease, and so on. Thus, to a certain extent, hygiene should be differentiated according to the type. This is especially essential as regards posture, exercise, nutrition, and the like.

It should be our purpose to help make the life of every child a period of wholesome, healthy development, with the fullest possible energy available for whatever stress to which the individual may be subjected.

To the Medical Profession: From the purely medical point of view (20) the recognition of these types is important since the types apparently carry their own potential of disease. The tuberculous and the infectious in general, the nervous diseases and acute mental disorders, the hyperglandular disturbances, the progressive anemias, the atrophic arthritis, many intestinal disorders, etc., are naturally associated with the slender type. The arterio-sclerosis, hypertrophic arthritis, gout, diabetes, chronic disease of the kidney, gall stones, the degenerative mental disorders, etc., are common to the heavy type. The suggestiveness to this in treatment must be obvious.

The carnivore seem to reach a more advanced age, though it is more subject as stated to such childhood diseases as carbohydrate intoxication and gastro-intestinal symptoms, tuberculosis, and in general, diseases of the respiratory tract and digestive and nervous symptoms.

The herbivorous is subject to diseases of the gall-bladder, liver, arteries, and cardio-renal organization.

Dr. Goldthwait (20), in his studies, has covered the field of possibilities, indications and necessities, so thoroughly that little can be said except in reinforcement of his remarks. He has shown at least some of the definite meanings of type for physicians alert to new paths of efficiency. He has considered the present tendency, due in part to the increasing prevention of natural elimination of the unfit, toward the carnivorous type with both its good and bad qualities, and suggested methods by which the tendency of the race in this

part of the world may be turned to positive good account for the future.

But of greatest moment is his statement that the coming importance of the understanding of type will necessitate a new method of teaching anatomy, physiology and the allied sciences.

The time is in all certainty, soon coming when it will no longer be taught as at present in the best schools that, for example, the human intestine is so many feet long, and that measurements obtained above and below this figure are variations from the normal.

It will, on the contrary, be recognized that there are two structurally, functionally, absolutely different types, both normal of their kind. One type will have perhaps double the length of the intestine to be found in the other; the textbook's norm of old will be somewhere between these extremes, and will be of less consequence than either, for the ailing patient will probably fall either one side of the normal or the other, according to his type. But after all, the time will come when the student will receive this newer knowledge in his routine instruction.

The opinion is ventured (20) that not many medical men realize the value of type and what it may mean to them or to their patients. Not many are there who, looking at a man in the street can give an approximately correct outline of the anatomy and internal physiology of the stranger? Yet for the medical man this or something like it should be common knowledge.

No doubt ere long some medical school will be the first to incorporate lectures on type in the curriculum. Then others will follow, giving the student and patient alike the benefit of this newer knowledge of type, this newest aid to the sciences and art of medicine.

To the Employer of Labor: The man and the job: will they fit each other? Bryant (6) writes: Some such question is ever presenting itself in one form or another to the employer or his subordinates. How is one to tell? The expert knows at a glance perhaps. Ask him how he knows, and it is doubtful if he can go much further than to say that his judgment is based on experience. Type provides another key, should experience be scanty.

Dr. Bryant had a discussion on type with a large employer of labor in one of the government services. The official found the subject interesting, for long experience had enabled him to divide labor into two classes. Being asked on one occasion by the chief of service how much help he wanted for a certain piece of work, he replied without thinking how it

would sound to his chief, "about so many broad-backs and so many narrow-backs." Under the circumstances this remark necessitated apology and explanation, but in it lies a nut-shell compend of the relation of labor to type. The explanation was to the effect that the broad-backs were the office force, who stayed behind and worked up the data obtained by the narrow-backs; the latter were to draw their pay for their proficiency in overcoming obstacles to success in field work.

To the Educator:, Bryant (6) says, "Present conscious medical appreciation of type only follows upon some thousands of years of unconscious appreciation of types by the non-medical world, and that the chief lesson to be learned is concerning the value of education upon this subject."

We may then say, education is, however, the real question at issue. All the facts may be correct, but if they remain unknown for years they must needs be discovered anew as were Mendel's laws, before they became useful.

"There are heavy types of individuals and the slender types (20) and the differences have been recognized not only in the industry, but also by the sculptors, painters and by the pedagogues. Of course, none of these types is better than the others—they are different. We need them all in the work of the world." But their differences, says Dr. Burnham, have great importance for hygienists and school teachers.

Again citing from Dr. Burnham (11), "From the point of view of hygiene, the whole aim of education in the early years should be modified and the emphasis placed primarily on health and normal development. Hygiene shows the vital importance of normal development and protection from disease in these early years."

It seems to me this is of great significance and more especially for the carnivorous type.

We must always remember that there are these differences in the types.

Now, for example, as regards diet: We should not generalize but individualize. A child who is of the carnivorous type cannot be given a straight vegetarian diet, nor can a herbivorous child be given a straight proteid diet.

Being concerned mostly with children in the adolescent formative stage (6), the constructive opportunities of the educator loom large, and a knowledge of type puts at his disposal a means of insight into the mental and physical makeup of his pupil which can in no other way be so easily acquired; the possibilities for helpfulness and prevention are almost limitless. Environment is doubtless important, but it must after all be considered as affecting different material in

different ways, and a short fat boy will under a given stimulus react in an absolutely different manner from a tall, slender boy.

Here is a new boy. What is he and how will he act and for what will he be best prepared? A physical examination will at once determine whether he is of an extreme or intermediate type. If he is of intermediate type, a medical examination, with perhaps a thorough Roentgenographic study of the gastro-intestinal tract will further aid classification. This accomplished, all else within reasonable limits of error and with only sufficient exceptions to prove the rule, may in a broad way be predicted. The physical and mental education may be directed into proper channels, and the working boy may be prepared for a definite occupation with full assurance that it will be one in which he will appear to good advantage.

Conclusion: The study of type seems to be fundamentally important and is a significant factor in the constructive work of the future. Many basic problems present themselves and the effect of diet and climate upon type and the relation of both these factors to the evolution of type in a given locality. Thus Cattell has recently argued that climate has a striking influence upon mentality and Ellsworth Huntington believes that climate may be a determinator of civilization.

If repetition, reiteration without irritation, is a key to education in a new subject, then it behooves us to reiterate that Dr. Goldthwait and Dr. Bryant have in their discussion of type projected a ray of light in the medical teaching, hygiene and education of the future.

Bryant (6) concludes in a recent paper that the theory of type can and should be applied to the conditions of practice. Knowledge of the meaning of type is an asset valuable to the practitioner in every field of human endeavor.

In a personal communication from Bean, he states: "I consider the nasal index, face index, ear form, relative length of trunk and extremities, as well as the time of appearance of the permanent teeth and the cranio-facial index, all important to establish the relative development of the individual. We need data on the same child from six to sixteen years, in a sufficient number of cases, to determine the stage of development at each age for each of the types, at least, the Hypo, the Meso and the Hyper-morph."

Finally, in a word, adaptation to type is fundamental to pedagogy, hygiene and efficiency.

This preliminary study suggests a number of important problems for investigation; among them are the following:

1. To what extent does diet, exercise, climate, etc., influence the development of types?

2. How far should we try, or how much effort should be made, to modify, change, or develop a carnivorous toward the neutral or herbivorous type; or the herbivorous toward the neutral or carnivorous type?

3. How often do the types change during life?

4. To determine correlations of the types with temperament, scholarship, physiological age, moral ethics, etc.?

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A CRITICAL STUDY OF THE HARVARD-NEWTON COMPOSITION SCALES

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A. Introduction

1. *Scientific Movements in Education.* At present, the center of the pedagogical stage in this country is occupied by the "school efficiency test" movement which has for its purpose the creation and application of standard tests and scales for studying the efficiency of large numbers of school children in the various school subjects. The efficiency of the pupils is judged on the basis of the material results of their school work when measured by these standard tests and scales, which are derived in most cases by the statistical treatment of the central tendencies of the opinions of numerous judges. The active workers in this sphere seem to think that they are laying the foundations of a science of education, and that theirs is the only scientific pedagogical movement. The main contributors in this field are Thorndike, Ayres and Courtis.

We cannot, however, talk about a science of education unless we take into account two other important scientific movements in pedagogy that originated and developed in Germany, and that, unfortunately, are too little known in this country, viz., (1) experimental pedagogy, represented by the work of the late Professor Ernst Meumann, and (2) experimental didactics, represented by the work of Dr. Wilhelm A. Lay. Meumann and Lay, and their followers, occupy themselves in studying by means of scientific methods of investigation two large groups of pedagogical problems—(1) the psychophysical nature of the school child (experimental pedagogy), and (2) the most economical and hygienic methods of teaching and of learning (experimental didactics). They use the methods that have been so fruitful of results in the physical, and especially in the mental sciences, viz., systematic observation, measurement, questionnaire, statistics, and experiment, supported wherever possible by verified introspection.

In this country many professors, students, superintendents, principals and teachers are at present engaged in writing books, monographs or articles on standard tests and scales.

All who are so engaged may be roughly divided into three classes—(1) those who devise scales, (2) those who praise them, (3) those who condemn them. There is a crying need for a fourth class, namely, those who will study them historically, critically, comparatively, and experimentally in the light of experimental-pedagogical criteria and methods. Perhaps the future will give rise to this class.

The aim of the present article is to study critically the "Harvard-Newton" or "Ballou" scales for the measurement of English compositions, in the light of the criteria and methods of experimental pedagogy and experimental didactics as laid down by Meumann, Lay and their followers.

2. *Tests of Efficiency in Composition.* Before proceeding with the study of the Harvard-Newton Scales, brief reference will be made to previous statistical studies of efficiency in English composition. These may be divided into two groups—1. Standard Tests, and 2. Composition Scales. The language tests of Rice(8), of Bliss(3), and of Courtis(4) belong in the first group. The composition scales of Hillegas(5) and of Ballou(2) belong in the second group. We cannot here enter into a discussion of the first group, standard tests, but we must reserve them for future consideration. For a detailed criticism of the Hillegas Scale the reader is referred to the present writer's article, "A Critical Study of the Hillegas Composition Scale," in the PEDAGOGICAL SEMINARY for December, 1914(7).

The most recent attempt to devise a composition scale is that of Ballou. We will now proceed to a detailed discussion of these scales, the "Harvard-Newton Scales for the Measurement of English Compositions"(2).

B. THE HARVARD-NEWTON (BALLOU) SCALES

1. *Aim*

The study which led to the derivation of the Harvard-Newton Composition Scales grew out of the attempts on the part of teachers of Newton, Mass., to use the Hillegas scale in grading compositions. This scale being found unsatisfactory, owing to what seemed to these teachers to be inherent faults, "it was proposed to prepare another scale or rather a series of scales, in such a way as to obviate these apparent defects" (2, p. 5).

The aim of the study is stated as follows: "It is to create an objective standard for the measurement of one of these intellectual attainments, namely the writing of English that the preparation of this series of scales is undertaken. By the wise use of such standards it is hoped that teachers may

come to agree more uniformly in the judgments of the value of an English composition written by an eighth grade pupil." (2, p. 7).

II. *Means*

1) *Subjects.* The subjects of this study were eighth grade pupils in the schools of Newton, Mass. Eleven schools participated, grouped into five groups having approximately the same number of eighth grade pupils in each group. Groups I and V consisted of one school each, and the other groups of three schools each.

2) *Material.* The material of this study was twenty-five methodically selected compositions for each type of written discourse, description, exposition, argument and narration. How the compositions were obtained from the pupils and the basis of selection will be discussed fully under the heading of mode of procedure. The set of twenty-five compositions in description that were used in the study are reproduced in full on pages 14-27(2).

3) *Judges.* The judges or readers of the compositions were fourteen eighth grade teachers and ten elementary school principals of Newton, who graded and ranked each set of compositions.

III. *Method.* The collective statistical method was used in this study. After the twenty-five compositions of each type were graded and ranked by the twenty-four judges, their judgments were submitted to statistical treatment, which will be discussed fully under the heading of procedure.

Several general principles derived from the use of the Hillegas Scale guided the author of this monograph in the formation and application of his scale. He says, "From the attempted but only partially successful use of the Hillegas Scale, it seemed that to be successfully used a scale for measuring compositions must be formed and applied according to the following general principles."(2, p. 7) Then follows a detailed discussion of six general principles(2, pp. 7-10), the main points of which will be quoted briefly.

1. "A scale should not aim to measure too complex a product."(2, p. 7)

2. "A scale should be made up of compositions having the same characteristics as those which the scale is intended to measure."(2, p. 8)

3. "A scale should conform, as far as practicable, to the present almost universal practice of rating school work either by the use of letters or of numerical grades."(2, p. 8)

4. "The readers on whose combined judgments the selections of the scale is based should be those persons most

familiar with the qualities of the compositions to be measured by the scale."(2, p. 8)

5. "The compositions of a scale must be analyzed as to merits and defects, else there is not only no guarantee, but little probability, that the users of the scale will interpret the qualities of these compositions any better than they now interpret the qualities of compositions without the use of any objective scale."(2, p. 9)

6. "Teachers must accept a scale as a standard, in the same sense that they accept other standards."(2, p. 9)

IV. *Mode of Procedure*

1. *How the compositions were obtained from the pupils.* In order to obtain compositions that were characteristic of the work of eighth grade pupils in these schools the teachers and the pupils suggested several topics in description, exposition, argument, and narration, familiar to the pupils, each pupil choosing his own subject. "Pupils were asked to write a composition 'about a page in length,—not over two pages.' They were allowed opportunity within school time up to one hour, for self-preparation for the writing, and another hour for self-correction of their productions, in order that each composition written might be the best unaided writing of which each pupil was capable."(2, p. 11) After the compositions were written each class teacher selected that 25% of the compositions which represented all degrees of ability from the poorest to the best. The compositions were then graded numerically by the eighth grade teachers in the school and the principal independently. Each school sent in from one to three of its "best" compositions as judged by the eighth grade teacher or by teachers and the principal.

From the selections sent in by the teachers it was decided to choose twenty-five samples of each type of composition to be read and graded by teachers as a basis for selecting a scale of six compositions representing the grades A or 95%, B or 85%, C or 75%, D or 65%, E or 55%, F or 45%. The director of the experiment read each composition carefully and on the basis of the preliminary ratings given each composition by the teachers and principals, together with his own judgment as to the general fitness of each composition for a place in the scale, he selected the twenty-five samples of each type of composition that were to be submitted to the judges. "The twenty-five compositions which finally made up the set from which a scale was to be selected usually included about ten 'bests' and fifteen others, or three samples each of the representative grades below 95%." (2, p. 12)

2. *How the compositions were prepared for the judges.* Each composition was typewritten and mimeographed exactly as it had been written by the pupil, great care being exercised to reproduce all errors. Each composition was given a number and all identification marks of the original compositions were omitted. One set of each type of composition was then sent to each of the fourteen eighth grade teachers, and to each of ten elementary school principals, together with the following instructions for grading:

"In rating it is suggested that the following procedure be uniformly adopted:

(a) Arrange the themes in a series in the order of their merit.

(b) To the theme considered to be the best give the arbitrary rating of 95%.

(c) Rate each of the remaining themes with reference to this standard, giving it a percentage value and entering the same on the sheet provided both under 'No. of Theme,' and 'Choice of Theme.'

It should be borne in mind that these samples are eventually to serve as standards for eighth grade themes; it is important, therefore, in rating, that all other considerations be set aside and that an 'F,' for example, be a reasonable eighth grade 'F,' etc."(2, p. 13)

The set of twenty-five compositions in description is given in full on pages 14-27.

3. *How the results were tabulated.* a. *The Grade Basis.* The grades given to each of the twenty-five compositions in description by each of the twenty-four readers are shown in Table I. (2, p. 28) Table II (30, p. 29) shows the grades given each composition in description arranged in a descending order without designating the readers who gave them. Table III (30, p. 30) gives (a) the highest grade, (b) the lowest grade, (c) the maximum variation, (d) the mean or average grade, and (e) the median grade for each of the twenty-five compositions in description.

b. *The Rank Basis.* The rank assigned to each composition in description by each reader is shown in Table IV (2, p. 32) From the data given in this table a distribution was prepared for each composition showing the rank given to it by each of the twenty-four readers. (2, p. 33) Table V (2, p. 34) shows the median rank and the distribution of the ranks of each composition in description. From this table we see that there was great diversity of judgments among the readers. It was therefore decided to segregate that 25% of the readers who were radical or extreme in their ranking by drawing lines in the distributions so as to

cut off the 25% or less of the readers who were considered extreme. Table VI (2, p. 35) shows (a) the highest rank, (b) the lowest rank, (c) the maximum variation in rank of the series, (d) the maximum variation of 75% of the cases, (e) the median rank, (f) the average deviation for each of the twenty-five compositions in description.

4. *How the scale was selected.* a. *Fixing the standard requirements.* "Before selecting the scale on the basis of this information it is necessary to answer these questions. What are the standard or ideal requirements for each of the six compositions of the proposed scale in terms of the suggested basis of selection? What ought the maximum variation, the mean, and the median to be, according to the grade basis of selection? What ought the two maximum variations, the median rank, and the average deviation to be, according to the rank basis of selection?" (2, p. 36)

(1) ". . . other things being equal, that composition is most suitable for a place in the scale about which there is greatest agreement in judgment both in grade and rank, as shown by a small maximum variation and a small average deviation." (2, p. 37)

(2) ". . . the six compositions selected ought to have a mean or average grade of 95%, 85%, 75%, 65%, 55% and 45%." (2, p. 37)

(3) "The six compositions for the scale should have respectively a median grade of 95%, 85%, 75%, 65%, 55% and 45%." (2, p. 37)

(4) The six compositions in the scale must be approximately the same distance apart in rank. By dividing the total number of points in rank between the first and last compositions in the series into five equal divisions we find that 4.8 points in rank should separate one composition from the adjacent one in the scale, in order that they should be equidistant one from the other. The A or 95% composition should have a median rank of 1.0; the B or 85% composition, 5.8; the C or 75% composition, 10.6; the D or 65% composition, 15.4; the E or 55% composition, 20.2; the F or 45% composition, 25.0.

b. *Selecting the Scale.* The twenty-five compositions were classified into six groups corresponding to the six grades or ranks of composition in the proposed scale. This classification is given below.

After arranging the twenty-five compositions into groups as shown above, the next step was to select that one composition from each group that conformed most closely with the standard requirements, and was therefore most suitable for the scale. Then there follows a detailed discussion of

In General	Composition Nos.
A group of compositions (All from 90% up)....	10, 15
B " " " (" " 80 to 89%)..	1, 2, 4, 8, 13, 17, 19, 20
C " " " (" " 70 to 79%)..	16, 18, 21
D " " " (" " 60 to 69%)..	5, 6, 7, 12, 22
E " " " (" " 50 to 59%)..	9, 14, 23
F " " " (" " 40 to 49%)..	3, 11, 24, 25

the procedure that led to the selection from each of the six groups of the particular composition that was to be given a place in the scale. In tabular form are given the numbers of the compositions which are to be considered for a particular place in the scale, the statistical data pertaining to each composition, and the standard requirements for each composition in the scale. These tables are followed by a discussion leading to the selection of the most representative composition of the group. (Tables VII-XII, 2, pp. 40-41.)

To illustrate this part of the procedure the data will be given pertaining to the A Grade or 95% composition. The standard requirements for the A Grade or 95% composition were as follows: mean or average grade, 95%; median grade, 95%; median rank, 1.0. The data pertaining to the two compositions that are entitled to consideration for this place in the scale are given in the following table. (Table VII, 2, p. 40.)

No. of comp.	Highest grade	Lowest grade	Max. variation in grade	Mean or average grade	Median grade	Highest rank	Lowest rank	Max. variation in rank	Max. variation in rank of 75% of central cases	Median rank	Average deviation
10	95	90	5	94.6	95	1st	3rd	2	0	1.0	.25
15	95	80	15	89.6	90	1st	10th	9	3	3.0	1.33

By comparing the above data concerning each of the two compositions (No. 10 and No. 15) with the standard requirements, it can readily be seen that composition No. 10 corresponds almost exactly with the standard requirements for the A grade or 95% compositions. It was therefore chosen for that place in the scale.

Exactly the same procedure was followed in selecting the remaining five samples of the scale. The tabular and descriptive treatment of the data concerning these five selections must be omitted in a critical study of this kind in order not to lengthen it disproportionately. Under the heading of Results the summary table will be given showing the data concerning the six compositions that were finally selected for places in the description scale.

5. *Defining the Merits and Defects of the Compositions in the Scale.* The next step in the procedure was to define the merits and defects of each composition in the scale. This was done by a committee of high school and elementary school teachers with the coöperation of the teachers and principals who had originally read the compositions. Tentative paragraphs were prepared, and after being discussed, they were revised. Then a committee appointed for this purpose prepared the final definition of merits and defects, stating with regard to each composition in the scale, why it was better than the one below it, why it was poorer than the one above it, and also its own intrinsic worth.

The Description scale and the accompanying paragraphs were published in the February issue of the English Leaflets of the New England Association of Teachers of English with the request that members of the Association offer suggestions for improving them before final publication. The monograph does not state whether any suggestions came from this source.

6. *The Exposition, Argumentation, and Narration Scales.* Exactly the same procedure was followed in selecting the other scales. Table I (2, p. 59) shows the grade that each of the twenty-four readers gave each of the twenty-five compositions in exposition. Table IV (2, p. 60) shows the ranking of each composition in exposition by each reader.

Table I (2, p. 69) shows the grade that each of the twenty-four readers gave each of the twenty-five compositions in argumentation. Table IV (2, p. 70) shows the ranking of each composition in argumentation by each reader.

Table I (2, p. 80) shows the grade that each of the twenty-four readers gave each of the twenty-five compositions in narration. Table IV (2, p. 81) shows the ranking of each composition in narration by each reader.

V. *Results.*

The results of this study are presented in tabular and descriptive form. The tables and the descriptive treatment of the statistical data contained in them are given in great detail for the Description scale. As the procedure was exactly the

same in the Exposition, Argumentation, and the Narration scales, only the two source tables are given for each of these types of composition, while the descriptive treatment of the statistical data is entirely omitted. As the most important tables have been referred to above under the heading of Procedure, they will be omitted here. Only the summary table relating to the selection of the compositions of the Description scale is given below.

SUMMARY (30, p. 45)

Compositions of the scale	No. of compositions selected	Standard mean or average grade	Mean grade of composition selected	Standard median grade	Median grade of composition selected	Standard median grade	Median rank of composition selected
A grade or 95%.....	10	95	94.6	95	95.0	1.0	1.0
B " " 85%.....	13	85	83.5	85	85.0	5.8	6.0
C " " 75%.....	21	75	76.1	75	77.0	10.6	11.0
D " " 65%.....	22	65	66.6	65	66.5	15.4	15.0
E " " 55%.....	23	55	55.4	55	57.5	20.2	19.5
F " " 45%.....	25	45	44.9	45	45.0	25.0	23.5

From this table it can be seen how closely the statistical data concerning each composition of the Description scale correspond to the standard requirements for each step in the scale. The six compositions that were finally selected for this scale (numbers 10, 13, 21, 22, 23, 25) were chosen after each one of them was carefully compared with all the other selections that were entitled to consideration for any particular place in the scale. The compositions that were finally selected were found, after such comparison, to correspond most closely to the standard requirements, and were therefore chosen for places in the Description scale.

Space will not permit the publication of the scales in full, hence only the first and the last selections of the Description scale will be reproduced below together with the paragraphs giving the merits and the defects of each selection. The set of four scales has been separately reprinted and can be obtained for a small sum from the Harvard University Press, Cambridge, Mass.

DESCRIPTION SCALE

No. 1. "A" GRADE COMPOSITION, VALUE, 94.6%

A Storm in a Fishing Village[1]

It was a cold damp day in November. The sky was a heavy leaden color. In the east a black line stretched across it foretelling the coming of a storm. The houses across the way were dismal shadows,—flat, cold, heartless. A piercing chill penetrated to the bone. The rattle of a grocer's cart or the clatter of a horse's hoofs, seemed cold. The pedestrians were all clothed in black, or else the feeble light made them seem so, and they were cold—everything was cold, cold, cold. An awful lonliness pervaded all.

The black line in the east had grown into a cloud and was coming nearer, nearer, over the sea. Suddenly a gust of wind shook the very foundations of the houses,—another, and then a continuous blowing. The howling was horrible. Great sheets of foam were blown into the streets,—here and there a piece of wreckage hurled itself against a cottage. Fishermen's wives hurried down the narrow streets to the shore, straining their eyes for any sign of a wreck. Old seamen looked at the roaring sea and shook their heads.

By this time the black cloud had engulfed the sky. The day was like night, although it was not yet noon. Boys ran about with torches which were immediately extinguished, and the roaring called to mind the last day at Pompeii.

Rain had begun to descend. At first only drops fell on the hardened faces of old mariners, and on the pale countenances of wives, mingling with the drops already there. But soon great sheets fell, forcing the people indoors, to the poor shelter afforded by the groaning houses.

For about an hour the storm continued thus, then by degrees the wind lessened, though the rain still fell, and the ocean thundered. But soon the rain also slowly stopped and the roaring ceased. The black cloud rolled slowly away, leaving the tardy sun to shine on the drenched town and the great piles of wreckage on the shore.

Merits

This theme ranks high because the writer has a clear picture of the scene and has used words and phrases that bring the details of this picture clearly before the reader. There are good color images in such expressions as *leaden, a black line, great sheets of foam, the day was like night,* and *the sun shining on the drenched town.* Sound effects are strikingly brought out by such phrases as *the rattle of a grocer's cart, the howling, the wreckage hurled against the cottage, the roaring sea,* and *the thundering ocean.* The sensation of dreariness and chill is conveyed by the repetition of the word cold. The confusion caused by the storm is reflected in the anxious look of the wives of the fishermen. A further human touch is added in the mention of such details as *the extinguished torches carried by the boys* and *the drops of rain falling upon the hardened faces of the old mariners.* All these enumerations fittingly combine to produce a tone of coldness, desolation, and anxiety. The details are told in their natural sequences. This chronological arrangement has helped the writer to keep safely to his main point and effectively connect the details with each other.

Defects

The repetition of the word *cold,* while effective in bringing out the sensation, is somewhat artificial. *Loneliness* (line 9), is misspelled; a semicolon should supplant the comma in line 8. Omit the comma in line 6.

Comparison

The theme is superior to No. 2 in its richness of imagery, its wealth of details, its depth of feeling, its maturity of style (seen in the sentence-structure and the vocabulary), and in its mastery of mechanical forms.

[1] Composition No. 10 in the complete set.

No. 6. "F" GRADE COMPOSITION. VALUE, 44.9%

A Scene on the Prairies [1]

Along a large plain in the west with mountains on all sides. The sun was just sinking behind the mountains. Some trappers were on the plain just about to get their supper. They had one tend because there was just three of them. Beside their tent tripled a little spring. After the three trappers had eating there supper they sat down by the fire because it had growing dark. All of a sudden a bunch of Indain's came riding up. When they came near they fired of their guns and disappered in the darkness and the trappers turned into camp leaving one a the trappers on gaurd.

Merits

The commendable features of this composition are directness, simplicity, and a logical arrangement of details. The writer passes from the general to the specific in a natural manner. In spite of a change in the point of view in the last two sentences, the paragraph, as a whole, makes a clear picture.

Defects

Blunders in grammar and in spelling, lack of sentence-sense, and short, childish sentences make the rating of the composition necessarily very low. Such errors as *tend* for *tent, tripled* for *trickled, eating* for *eaten, growing* for *grown,* and the misspelling of *Indians* indicate either hasty, careless work, or slovenly habits of enunciation.

Comparison

Compared with the descriptions of the storm and of grandmother, the short sentences here show immaturity and weakness rather than skill or force. With a large amount of correcting of mechanical details, but with very little revising as a whole, this composition would be superior to No. 5.

[1] Composition No. 25 in the complete set.

VI. *Conclusions*

Under the heading of conclusions we may consider what the author says concerning the limitations of the scale and the effects of using it, although, strictly speaking, these are not conclusions that grow directly out of the data derived

as the result of the investigation. With regard to the limitations of the scale he says, "By the wise use of such standards it is hoped that teachers may come to agree more uniformly in their judgments of the value of an English composition written by an eighth grade pupil. It may be reasonably doubted whether it will ever be possible for educators to measure the results of school training as accurately as laymen measure temperature with a thermometer, or a board with a square, or a piece of carpeting with a yard stick. Nevertheless, objective standards should serve as a basis for the exercise of the subjective judgment, and until objective standards of measurement are established in the realm of educational practice educational progress will be determined as heretofore, by mere opinion and hence cannot be based on scientifically determined educational facts." (2, p. 7) In another place he says the following, "Although a scale made on this basis seems to promise much beyond what has been thus far attempted, nevertheless, its real worth will have to be determined in practical use in the school room." (2, p. 10)

With regard to the effect of using the scale, the author refers briefly to an initial experiment in the use of the description scale made in Arlington and in Boston. "Eighth grade teachers and elementary school principals in these two cities graded a set of twenty-five eighth grade compositions secured for this purpose, both without the use of the scale and with it. With the use of the scale the results showed a reduction in the extreme variation of judgments, that is, no two teachers were quite so widely divergent as before. The average variation was also less. But in this matter neither the average nor the extreme variation is the most important consideration. Far more important is the effect which the use of the scale has on the grading of each individual teacher. To ascertain this is obviously a complicated matter, and it requires more time than has been thus far at our disposal. This phase of the problem will be the subject of further investigation." (2, p. 58)

C. Criticism of the Harvard-Newton (Ballou) Scales

I. *Articles Concerning the Scales.* Before the publication of the Harvard-Newton Bulletin (2) which gives a full description of how the scales were derived, a brief description of the scales was published by the New England Association of Teachers of English (Leaflet No. 115, 1-11, February, 1914). The scales have been criticised by Watson (11, p. 57), who finds fault with the division of the subject-matter (description, narration, exposition, argumentation). Baldwin seems to think that the chief weakness of the scales lies in

the fact that the study by means of which they were derived was not based upon a sufficiently large number of compositions (1, p. 3). Hudelson, who used the description scale in a test of the composition work of 386 pupils of the seventh, eighth and ninth grades in the schools of Bloomington, Indiana (6, pp. 115-122), believes that no scale "will suit all localities, because no set of topics will furnish the proper motive for pupils of all districts." He is also of the opinion that "each region, or even each school, should work out its own scale in all the discourses." (6, p. 122)

From all the above criticisms, those of Watson, Baldwin, and Hudelson, we can see that we have not as yet had a systematic criticism from the standpoint of scientific methods and pedagogical criteria, of the fundamental issues involved in Dr. Ballou's investigation. The present writer will present his criticisms under the headings of (1) aim, (2) means, (3) methods, (4) procedure, (5) results, (6) conclusions. He will deal mainly with the scientific validity of the scales, their applicability for administrative and pedagogical purposes, their advantages and disadvantages, and finally, will give several suggestions for the further study of standard tests and scales. He will also endeavor as far as possible to compare the Hillegas Scale with the scales forming the special subject of this study.

II. *Criticism of Aim.*

The aim of Dr. Ballou's study is to create an "objective" standard for the measurement of the merit of English compositions written by eighth grade pupils. His aim is more restricted than that of Dr. Hillegas, who strove to derive a scale for the measurement of quality in English composition by young people. Ballou and Hillegas differ in that the former wishes to derive a standard which is to be applied in a much narrower field, but they agree in that both seek to measure composition work on the basis of the material result without regard to the conditions under which the result was obtained, although Ballou comes nearer toward conforming with pedagogical requirements on this point than does Hillegas, as we shall see later.

It seems to the present writer that it would be of vastly greater importance for the pedagogy of composition if instead of spending our time and energy in deriving "objective standards" for the measurement of efficiency in composition, we turned our attention to the experimental investigation of such problems as these—1. What are the best methods of stimulating the imagination and arousing the emotions of the pupil to the end that he may give verbal expression to his inner

life either orally or in writing? 2. What is the influence of various methods of presentation upon the oral and written composition of pupils? 3. What is the influence of the nature of the material upon oral and written composition? 4. What are the principles for the selection of material for composition? 5. What is the influence of oral composition upon written composition? 6. To what extent, if at all, is ability in composition work dependent upon native endowment? 7. How can the pupil's ability in composition be improved? 8. What qualities of oral and written expression are peculiar to pupils at different ages, in different grades, and in different localities? 9. Which is better, free, spontaneous, creative composition about what the children have observed or experienced, or compositions on subjects set by the teachers and written from outlines after considerable drill upon the forms of expression (freie oder gebundene Aufsätze). 10. To what extent should the attention of the pupil be consciously directed to the means by which he produces his effects? 11. Where can a pupil do better composition work, in school or at home? A beginning in the investigation of such questions has been made by Schmieder (9) and others in Germany. In a word, we would make great progress in improving our composition teaching if we conducted experimental-didactical investigations of such problems as—1. The economy and hygiene of teaching composition (the teacher's work), 2. The economy and hygiene of learning composition (the pupil's work), 3. The selection of material for composition.

III. *Criticism of Means.*

Both Ballou's study and Hillegas' study are weak in that neither of them gives a historical and critical account of previous investigations of efficiency in composition. Hillegas gives a brief descriptive but not critical summary of the work done in the derivation of standards for measuring efficiency in spelling, arithmetic, and penmanship. He does not refer at all to the studies of Rice (8) and of Bliss (3) on efficiency in language work based upon tests in the reproduction of a story. Ballou refers briefly to Hillegas' investigation (5) and to several investigations on the reliability of grading work in various school subjects. In the opinion of the present writer, Dr. Ballou's work would have been greatly strengthened if, before he made his original investigation, he would have made a careful, thorough, historical and critical study of the work of Rice, and especially that of Hillegas. His original work would have been still further strengthened, if he had carried out a series of preliminary tests for the purpose of comparing and evaluating the work of Rice and of Hillegas. Such tests

would have enabled him to discover the weak points and the strong points in their criteria, means, methods, procedure, results, and conclusions. It would have been possible for him to localize the difficulties in his particular problem and to prepare to meet these difficulties in the light of the mistakes of his predecessors, as shown by a preliminary series of comparative tests.

Dr. Ballou did not altogether ignore the Hillegas Scale. He says, "An experiment with the Hillegas Scale showed that the use of such an objective measure did unify the grades given to composition by teachers. It was also found, however, that the Hillegas Scale was not satisfactory to the teachers of Newton, owing to what seemed to them to be inherent faults. These faults may be stated briefly as follows: (1) the scale aims to measure too varied a product; (2) the compositions in it are not typical of good school work; (a) some are artificial, (b) others are 'bookish,' really reproductions and (c) no conversation is contained in any of them." (2, p. 5) Dr. Ballou refers to an experiment with the Hillegas Scale, but he gives us only his conclusions. He fails to tell us the aim of this experiment; he tells us nothing about the material, the subjects, and the judges. We are left totally in the dark as to the method and mode of procedure used in this experiment with the Hillegas Scale, and none of the data are presented, described, and interpreted. Only the conclusions are given and we are asked to accept them. Dr. Ballou should have conducted a series of preliminary tests with the Hillegas Scale before beginning his original investigation, and in order that these preliminary tests might serve as a scientific basis for his own investigation, they should have been presented in detail.

As far as the subjects of the investigation are concerned, while Dr. Ballou drew upon the work of a much smaller number of pupils for his material than did Dr. Hillegas, still we know more about the conditions under which the compositions were prepared in Dr. Ballou's study. But both studies are defective in that they do not give us full and detailed information regarding all the objective and subjective conditions under which the compositions were written. We cannot judge a composition properly from the pedagogical point of view unless we know the following facts concerning the writer of the composition: 1. age, 2. grade, 3. sex, 4. nationality, 5. general intelligence, 6. school brightness, 7. capacity for composition work, 8. social status, including home surroundings. We must also know in detail the conditions under which the composition in question was written, for example—1. time of year, 2. time of day, 3. subject of the composition,

4. the pupil's mental attitude towards the composition, 5. how was the composition presented by the teacher, 6. what preparation was made by the pupil for the writing of the composition, 7. is the pupil's composition verbal or concrete in its content, that is, is it based upon memory of what the pupil has heard or read, or is it based on things that he has observed and experienced? 8. the pupil's physical and mental condition at the time of writing the composition—fatigue, attention, interest, disposition, etc. The present writer has for some time been engaged in conducting a series of preliminary experiments in composition. He has endeavored, as far as possible, to keep in mind, to control, and to record all objective and subjective influences that may affect the result. In other words, he has been trying to study experimentally, the composition work of pupils, in the light of all the conditions under which the work was done.

As to material, while Dr. Ballou used a much smaller number of compositions than did Dr. Hillegas, still, they were more representative of children's real composition. They were divided according to the types of discourse ordinarily written by pupils as part of their school work. They were more concrete and less formal than Hillegas' samples, being more closely connected with the interests, activities and experiences of the pupils.

As far as the judges or readers of the compositions are concerned, while Dr. Ballou had a smaller number than Dr. Hillegas, still, the former selected these judges more in accordance with pedagogical criteria than did the latter. Dr. Ballou's judges were fourteen eighth grade teachers and ten elementary school principals of Newton. These judges were familiar with the composition work of eighth grade pupils in the Newton schools and knew the conditions under which the compositions were written. They were therefore in a better position to judge the merit of the compositions in this study than were the "expert judges" in Dr. Hillegas' study, many of whom had never taught composition to young people and none of whom knew the conditions under which the compositions that they judged were written.

IV. *Criticism of Methods.*

Dr. Ballou used substantially the same methods as did Dr. Hillegas, viz., the collective statistical method, that is, the data were obtained by collective or group tests, and were submitted to statistical treatment. The present writer will therefore repeat, with slight changes, the criticisms that he made of the method used in the derivation of the Hillegas Scale. (40, p. 569)

Dr. Ballou's study cannot be called a pedagogical experiment because it does not fulfill the requirements of such an experiment. He does not give a detailed account of all the objective and subjective conditions under which the compositions were written, nor were these conditions intentionally varied to isolate the influences of certain factors. He studied merely the opinions of a number of judges as to the relative merit of pupils' compositions. Dr. Ballou proposes that his scales should be used for pedagogical purposes, but they were not derived by experimental-pedagogical methods. They were derived by purely statistical methods.

Experimental pedagogy employs three methods, (1) statistics, (2) experimentation, (3) measurement. Statistics are used chiefly in the study of the physical characteristics of pupils, and under certain limitations in social measurements. As has been well pointed out by Dr. Tidyman in his critical study of Dr. Rice's investigation of spelling efficiency (10, p. 397), "The statistical method is limited to facts of quantitative determination. Qualitative facts are beyond its sphere. It is concerned with the what, not with the causes and conditions underlying phenomena. Because of these limitations of nature and purpose it cannot *settle* pedagogical questions. Many questions it cannot consider at all. Others it can consider but partially. At best, it contributes only a bit of evidence which is seldom, if ever, sufficient to decide the case." The statistical method used by Dr. Ballou, and by almost everyone who is engaged in creating standard tests and scales, is utterly lacking in pedagogical criteria. A result may be obtained that is valid when judged from a statistical point of view, but it may be entirely valueless when viewed from the standpoint of pedagogical standards.

The scale was derived by a statistical treatment applied to opinions. The data were therefore subjective rather than objective. The scale is based upon a determination by collective statistical methods of the central tendencies of opinion as to relative merit of a number of compositions. A scale based upon the average or median opinion of a number of judges is not, strictly speaking, an objective scale.

In the formation and application of his scales, Dr. Ballou was guided by several principles derived from the use of the Hillegas Scale. These so-called "principles" have already been quoted under the heading of *Methods*. How did Dr. Ballou derive these six "principles"? He says, "From the attempted but only partially successful use of the Hillegas Scale, it seemed that to be successfully used a scale for measuring compositions must be formed and applied according to the following general principles."(2, p. 7) We cannot accept

these so-called "principles" as conclusions based upon experiments with the Hillegas Scale because Dr. Ballou does not tell us that this scale was used under uniform and carefully controlled conditions. In fact we know nothing at all about the conditions under which the Hillegas Scale was used by him and those who coöperate with him. Hence Dr. Ballou's "principles" are wholly arbitrary, for we are not given any scientifically determined facts upon which they are based. These "principles" are practical and statistical rather than pedagogical and scientific.

V. *Criticism of Procedure.*

In general, the procedure of Dr. Ballou was similar to that of Dr. Hillegas. The present writer will therefore repeat with some modifications his criticisms of Dr. Hillegas' procedure.(7, p. 571)

In order that any pedagogical study, investigation or experiment may be considered scientific, it must fulfill the conditions of a scientific method of investigation. It must have three stages, the first of which is the preliminary series, to enable the experimenter to formulate a plan of experimentation, to familiarize him with this plan, to localize all unforeseen difficulties, and to eliminate the effect of practice. These experiments must never be included in the results. The second stage is the real series, to derive the data upon which the results and conclusions of the investigation are based. The third and final stage is the control series, to check the results obtained in the real series. Dr. Ballou's study did not fulfill the above conditions as there was neither a preliminary series of tests, nor a control series. There are errors in the results because the judges had no opportunity to become familiar with the mode of procedure, and because their judgments would have been entirely different with practice. If the same judges were asked to grade and rank the same compositions a second time, without any knowledge of how they had graded and ranked them the first time, the results would undoubtedly be different. Dr. Ballou's procedure was superior to that of Dr. Hillegas in that we know something about how the compositions were obtained from the pupils, but unfortunately we do not know all that we ought to know concerning the objective and subjective conditions under which the work was done. As has already been pointed out, we do not know enough about the pupils who wrote the compositions—age, sex, nationality, general intelligence, school brightness, capacity for composition work, home surroundings, etc. We are also ignorant of such circumstances as time of year, time of day, varying subjective conditions of the

teachers who presented the compositions. We are not told anything about the subjective conditions of the pupils, as fatigue, interest, attention, motive, preparation and disposition. All of the above inner and outer conditions were neither considered nor controlled by the investigator.

VI. *Criticism of Results*

Every careful scientific-pedagogical investigation, in addition to graphic and tabular presentation of the results should give also a full descriptive presentation of the general and detailed results. Dr. Ballou used no graphs, but he presented his results fully and adequately by means of tables and descriptions. However, as the results of a scientific investigation follow from all that has gone before, viz., the problem, the aim, the means, the method and the procedure, we cannot place much reliance upon the validity of Dr. Ballou's results in view of the criticisms that have been given above. Furthermore, no attempt is made to interpret the results, but they are taken at their face value.

The compositions constituting the Harvard-Newton Scales are superior to those composing the Hillegas Scale because they are more typical of actual school work in composition, they are less bookish, less formal, more original, more concrete, and closer to the interests, activities and experiences of the pupils. The limitation of the scales to the measurement of the value of the English compositions of eighth grade pupils, and the use of a separate scale for each of the four types of discourse, make the Harvard-Newton Scales decidedly superior to the Hillegas Scale. These two improvements come much nearer to answering pedagogical requirements, but they are not exactly in harmony with experimental-pedagogical criteria as has already been explained.

VII. *Criticism of Conclusions*

The conclusions of a scientific investigation should grow directly out of the results. In Dr. Ballou's study the results are taken at their face value and are not subjected to analysis and interpretation. He is more modest in what he claims for his scales than are Dr. Hillegas and Professor Thorndike in their claims regarding the Hillegas Scale and other similar scales.

The Harvard-Newton Scales, the Hillegas Scale, and various other standard tests and scales are being used by supervisors, administrators, and investigators for administrative and supervisory purposes. They have been used in a number of school surveys, but the users of these tests and scales fail to realize that it is impossible to separate the administrative

and the pedagogical application of a scale. Its use for administrative purposes must be in harmony with pedagogical conditions and requirements. Both the Hillegas Scale and the Harvard-Newton Scales fail to fulfill pedagogical requirements in that they regard the composition work of pupils merely from the standpoint of the result. The creators and the users of these scales do not concern themselves with the question, "How did the child write the composition?" According to Meumann (Abriss der experimentellen Pädagogik, p. 310), the efficiency of a method of instruction is determined not merely by the outer result, but more so by the manner in which the result is reached. He says that it is not sufficient that a result is reached only materially, but it must be so reached that (1) the highest conceivable formal training of the mental powers of the child is secured; (2) the result must be attained by methods that are appropriate to the stage of development and to the individual endowment of the child; (3) the method must have a desirable moral effect. He points out that certain methods of instruction and of learning can strengthen the will of the child, increase his self-confidence, and enhance his self-activity while other methods may have the contrary effect. In view of this, how is it possible to determine the efficiency of a pupil's composition work or of a method of teaching composition merely by measuring the result by the Harvard-Newton Scale? From the point of view of pedagogical standards the most essential thing is not, "what results did the child attain?" but "how did he attain these results?" In the opinion of the present writer, herein lies the greatest defect of the Harvard-Newton Scales, the Hillegas Scale, and all other standard tests, scales, and systems of marking that consider merely the material results of the pupil's work, and entirely lose sight of the conditions under which the work was accomplished.

VIII. *Summary and Suggestions.*

The only advantages that the writer can see in the work of Dr. Ballou and those who coöperated with him are, first, that it shows that judgments of the efficiency of children in accomplishing school tasks, of the efficiency of a school or a system of schools, of the efficiency of teachers, of the efficiency of various methods of teaching and of learning, can no longer be left to the opinions of an individual or of a group of individuals. Such questions must be answered on the basis of facts that are derived experimentally by the use of scientific methods of investigation and in accordance with pedagogical aims, conditions and criteria. The second advantage of Dr. Ballou's work is that it furnishes us a good illustration

of the coöperation of the research department of a university with a school system, for the solution of some of the practical problems that confront teachers in their daily work. Pedagogical theory and practice would make enormous forward strides if such plans of coöperative research were perfected and extensively applied to the solution of pedagogical problems by experimental-pedagogical methods.

It may be true that we can get more uniform and less variable results in judging pupil's compositions by means of the Harvard-Newton Scales than by ordinary school marks, but the scales are wholly unsatisfactory and invalid from the scientific and the pedagogical points of view for the following reasons:

1. The aim is not pedagogical in that it seeks to create an "objective" standard for measuring composition work merely on the basis of results without regard to the conditions under which the results were obtained.

2. The scales are not based upon a thorough historical, critical, comparative, and experimental evaluation of previous investigations in composition efficiency.

3. The study fails to give us an account of the individuality of the pupils and the causal relations between their efficiency in composition and their latent capacities for such work, which are indicated by the pedagogical criteria of economy and hygiene of learning.

4. The methods used in deriving the scales are faulty. They are purely statistical and not experimental-pedagogical.

5. The scales are not really objective, because they were derived by a statistical study of subjective data-opinions.

6. The principles in accordance with which the scales were formed and applied are wholly arbitrary. They are practical and statistical, not scientific-pedagogical.

7. We do not know the contents of the judgments of the various judges as no introspection was taken at the time of grading and ranking the compositions.

8. The investigation was defective in its mode of procedure in that it lacked both a preliminary and a control series.

9. The scales are designed to measure the composition work of pupils merely from the standpoint of results. They do not consider the question, "How did the children write the compositions? To what extent is each composition a real expression of the inner life of the child? What was the influence of the work on the inner life of the child?"

In closing, the writer wishes to call attention to a conclusion that he has arrived at as the result of his study of the literature of experimental pedagogy and of school efficiency

tests, and of experience with students and practical school men working along these lines, namely, that there are many grave dangers that seem to him to menace the proper development of a true science of education. These dangers are—

1. The hasty acceptance of results and conclusions without a careful analysis of the methods by which they were obtained.

2. The failure to realize that a pedagogical necessity may have no relation at all to statistical interpretation and psychological analysis.

3. Ignorance of the distinctions between tests and experiments.

4. The attempt to solve pedagogical questions without regard to the criteria and methods of experimental pedagogy and experimental didactics.

5. The failure to evaluate tests and experiments historically, critically, comparatively, and experimentally.

6. The publication of data and of the conclusions derived from such data without an adequate account of the means, methods, and procedure employed.

7. The intrusion of personal, political and commercial motives in a field that should be entirely dominated by scientific and pedagogical motives.

8. The employment of statistical methods for the solution of pedagogical problems.

9. Hasty and ill-considered application of the results and conclusions of tests and experiments in pedagogical practice.

10. The invasion of the field of experimental pedagogy by an army of dilettantes and pedagogical quacks who become "scientists" overnight.

We must guard against these dangers, for it is only by adhering strictly to the ideals of science and to the methods and criteria of experimental pedagogy and experimental didactics that we can hope to develop a scientific pedagogy.

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SYSTEMATIC GUIDANCE FOR TEACHERS-IN-TRAINING IN THE GRADES

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Consciously or unconsciously, training school students begin during their practice-teaching to form teaching habits. If the training during this period is to be effective, the students should be systematically guided to conscious effort in the formation of good teaching habits and those habits which are most important should stand out conspicuously as aims. It is therefore highly desirable for those in charge of this part of a teacher's training (1) to determine definitely the habits that should be the foremost aims of the practice-teaching term and (2) to arrange for systematic guidance in the formation of such habits.

In deciding what habits are most important as aims for the teacher-in-training, my conclusions are based on a study of training school graduates during their first years of teaching. Observation of their work, and their own testimony in personal conferences reveal certain common deficiencies. What they lack should, if possible, be given their younger sisters.

These are the lacks that seem to be most common and most serious:

First, young teachers lack the habit of reflecting on their own work for the purpose of profiting by experience. Instead of this many of them have unconsciously acquired the habit of mourning over their failures. "My children don't know a thing," has a familiar ring to most of us.

Can we train these young people from the very beginning to put their energy into reasoning instead of emotion? To keep intellectual side up? I believe we can if we go at it systematically. And it is certainly worth the effort. For the establishing of such a habit among any considerable number of our youngest teachers would make for a more professional spirit and a more scientific attitude of mind in our teaching force. It would produce teachers less reluctant to try out new methods after they have found one way that "works." It would make for happiness by putting a teacher's happiness in her own hands. We of New York were officially declared by the Hanus report on the New York elementary schools

to be "static and discontented." Awful combination! If such a state of mind does exist, the real remedy lies here. Teachers so often say now, "I am so discouraged. I never receive a word of praise." One who works at a problem with the mental attitude of the scientist, the thoughtful observer, has little need of praise from official superiors. Such a teacher is not likely to be either static or discontented. Satisfaction comes with the joy of discovery. Mental depression has little hold on a mind actually engaged in thought. Moreover there can be no one so interested in a teacher's work as she herself. No one on earth can know the breadth and depth of it but herself. None can improve it much but herself. This thought gives to the beginner a stimulating feeling of adulthood and prevents any attitude of slavishness.

Considerable emphasis has been laid and must still be laid on preparation of lessons. I would not decrease the time spent in preparation, but I submit that a very important factor in preparation is lost if reflection on the previous work of lesson giving and on the observation of pupils' response is neglected.

This brings up the second lack that young teachers exhibit; the habit of basing the work they present to their pupils on the needs of the individual children. It is a very difficult thing to gauge the abilities of forty-five or more human beings of any age. It is an equally difficult task to give to each the exercise that is the next logical step in his education. It is only by careful observation and study and deep thought that these two things can be done. But the more difficult it is the greater the necessity of beginning at the very outset to cultivate the habit of observing the individual child and adapting each day's work to his needs. Why not aim straight at the goal from the beginning?

It may be argued that to place such an aim before the beginner is bewildering and discouraging. This would be true if the work of training were not made systematic and obviously progressive toward the end of showing the students practical ways of observing and studying children and practical methods of using the knowledge thus gained. Moreover, the approach to the subject needs to be attractive and convincing. Otherwise a scare, and shaken confidence, may follow the first plunge.

This brings us to the third great lack of our young teachers. It may be called a lack of conviction rather than a lack of habit. Too many of them have escaped from the practice term unconvinced that the best discipline may be obtained through good teaching. They cling to the idea that if they

could "get discipline first," teaching would be a simple matter. The expression of the opposite view by critic or other school official usually is met by teachers-in-training with polite silence and among themselves they say, "It isn't the teaching. It's the discipline." This is not a matter to be glossed over and kept in the background. It is better to grapple with it at the outset, for so often unhappiness and loss of health and spirits are the result of this struggle to "get discipline first." An unusually frank young teacher told this incident of her experience. "I was told to go and take a class that I had had before. On the previous occasion I had tried to manage my work according to training school precept. The result had been Bedlam. As I walked toward the room this time, I said to myself, 'I'll just throw over my ideals. They don't work.' So I scolded. I punished. I hollered. At the end of the day, I had found out that those things did not work either."

This young woman's experience is typical, and the conclusion usually drawn is a hopeless one. "It is my personality that is wrong." The slough of despond into which this throws a teacher, too often, leads to a surreptitious use of the rod. Now the rod is forbidden and the only way to teach happily without the rod is to teach well. For this reason, if for no other, too much effort cannot be spent on establishing the conviction in the minds of the pupil-teachers that their salvation in "discipline" is to be sought in good teaching.

The following exercises are arranged to enable a critic teacher to give systematic guidance to the teacher-in-training along the three lines mentioned above. Their arrangement presupposes a weekly conference with critic and fellow students on the subjects suggested under the heading "oral."

Conference I

Daily Preparation

Written

Choose two successive lessons given by you, this week, in the same subject, to the same pupils. Write your preparation of the second lesson. Show specifically how the experience and knowledge of the children, gained in the giving of the first lesson, influenced your second lesson plan.

Use this outline.

1. Observation of the children during the first lesson.
   - Written work, if any.
   - Oral work, if any.
   - Time limit of power of attention.
   - Habits of industry.
   - Response to commendation.
   - Response to reproof.
2. Reflection on your own work in the first lesson.
   - a. What had you done in the first lesson, that proved effective? Show how the children's response proved this effectiveness.
   - b. What had you done during the first lesson that proved ineffective? Show how the children's response proved this ineffectiveness.
3. Resulting lesson plan.

Oral

Bring up for discussion any serious difficulties that arose in your work on topic one or topic two of the written exercise.

If you found yourself unable in your second lesson plan to provide suitable work for *all* of the children, bring up the difficult cases for discussion.

Conference II

Executive Ability

Written

Keep a daily record of your use of the children's time. Compare it with the allotment of time in the course of study.

How many times this week have you run over the time allotted for a lesson?

How many times this week have you been obliged to leave a lesson unfinished because the time allotted was gone?

How many times have you finished the lesson planned before the time allotted was gone?

State the cause or causes in each case.

What is your present plan for avoiding the repetition of such occurrences?

Oral

Make a daily estimate of the number of children in your class who spent any part of the day in idleness. Estimate the amount of time so spent.

Be prepared to discuss the cause of such idleness and to suggest remedies.

Conference III

Discipline

Written

Choose some occasion this week when your class did not follow your lead. Briefly state the circumstances and try to account for your trouble.

Was it due to peculiarity of
- external circumstance
- lesson
- teacher
- class

If you could live that hour over again, how would you act?

Oral

1. Try to analyze the quality of leadership.
2. Why does a teacher need it?
3. Can it be consciously acquired? If so, how?
4. Consider some historic leaders of mankind.
   a. What reasons are there for supposing them to have been experts in their field of work?
   b. How did they show understanding of their followers?
5. Think of that teacher, of all those you have had in the past, whom you followed most willingly.
   a. How did she show mastery of subject and method?
   b. In what ways did she show appreciative understanding of her pupils?

Conference IV

Study of a Troublesome Child

Written

Make an appreciative study of a troublesome child.

His abilities.
His difficulties.
His achievements.
His efforts.

Oral

1. What ways did you find of studying this child in the class-room? Outside the class-room?
2. In what respect has your studying him helped him? You?
3. If you had known as much about him in the beginning as you do now, how would you have been enabled to avoid mistakes in dealing with him?

Conference V

Treatment of the Individual

Written

1. Make a study of an especially able child. (From the same grade if possible.)
2. Make a detailed comparison of the two children about whom you have written. Use the outline on your last mimeographed sheet for general topics, and use the lessons,—arithmetic, etc.,— for sub-topics.

Oral

1. Give arguments for and against giving such children simultaneous instruction.
2. What are the probable results to each if they are treated alike?
3. What advantages are there to each if they are taught individually?
4. If you have given individual instruction when you were in charge of a whole class, how did you manage it?

Base your answers to the above questions on observations and experiments made this week.

Conference VI

Groups

Written

1. Mount the best device you have used for a group working independently of the teacher.
2. If possible, show specifically that
   a. The device drills or teaches something.
   b. The device does no harm.
   c. The work planned is closely related to the work of the grade.
   d. Simpler materials could not have accomplished the same result.
   e. The device does not require too much preparation on the part of the teacher.
3. If your device is deficient in any one of these essentials, how do you plan to improve it?

Oral

1. On what basis had the class been divided when this device was used?
2. How did you induce the group working on this device to do their best?
3. How did you provide the children in this group with an incentive for better work next time?

Conference VII

Presentation

Written

1. Choose the lesson given by you this week, in which the presentation was most nearly satisfactory to you. Try to account specifically for your success.
   a. Did the children gain in knowledge or skill?
   b. Was the gain made through
      observation,
      reasoning,
      exercise,
      being told?

   Show that the way chosen was the best under the circumstances.
   c. Why did the children put forth effort? Was it due to
      attractiveness of aim,
      desire for knowledge,
      delight in consciousness of growing power,
      hope of material reward,
      fear of punishment?

   Show that the incentives used were the highest that could be expected to appeal.

Oral

1. How do you judge of your own success in the presentation of a lesson?
2. What incentives have you found good to call forth the children's effort?
3. Should an aim be stated at the beginning of every lesson?
4. When have you found it wise to re-present subject matter?

Conference VIII

Drill—Oral—Silent

Written

1. Describe the best drill you have used for a group working independently of the teacher.
2. On what basis were the children who took the drill selected?
3. State any reason you may have for believing this drill independent of the teacher better than one conducted by the teacher.

Oral

1. How do you determine when a class is ready for oral drill?
2. How do you prevent a class from suffering through hearing wrong answers?
3. How do you provide for the extra drill which the child who fails needs?
4. How do you make sure that the children not reciting put forth effort?
5. When do you consider further drill unnecessary?

Conference IX

Blackboard Work

Written

1. Outline the best lesson plan you have used, in which children's blackboard work was an important factor.
2. In just what ways was the lesson more profitable than it would have been without any pupil's board work?
3. Were you able to train the children's sense of relative values by your method of criticism of this work? How?

Oral

Choose one of the following topics to talk on:

Care of boards.
Work to be left on the boards.
Sketch maps, diagrams, illustrations, etc.
Use of boards for organization.
Children's criticism of children's board work.
How to avoid the inviting of cheating.

Conference X

Interest

Written.

1. Describe a lesson given by you, in which you first saw signs of loss of interest and then took effective measures to regain interest.
2. By what means did you detect the first loss of interest?
3. How many had lost interest when you became aware of the trouble?
4. By what means did you regain interest?
5. By what means did you hold the interest after it was regained?

Oral

1. During the week make a daily list of the signs of lack of interest you observe.
2. What do you find to be the most frequent causes of flagging interest?
3. As a result of this week's reflection, what plans have you for foreseeing and preventing flagging interest?

The following exercises show how the same ideas are carried out in special method:

Conference XI

Applications to Arithmetic

Written

1. Describe the best arithmetic drill you have given. Show specifically how it fulfills the requirements suggested by our oral exercise of conference VIII.

2. Describe the best arithmetic lesson plan you have used, which provides for every pupil's working arithmetic every minute of the arithmetic period. Show specifically how you used pupils' blackboard work, avoided inviting cheating, provided against wasting pupils' time, provided against wasting the teacher's time.

Oral

1. What is the most profitable arithmetic work you have found for a group working independently of the teacher?

2. What do you regard as the most important points to be considered in planning an arithmetic lesson? Refer to our paper on *daily preparation.*

Conference XII

English (Oral Composition)

Written

1. Make a study of two of your pupils, one, the ablest in oral composition, the other, the least able.

Rate each under the following heads:

- Thought
  - Spontaneity
  - Content
  - Coherence
- Language
  - Vocabulary
  - Pronunciation
  - Enunciation
  - Grammar

2. State specifically what you have done to raise class standards and add to class interest while giving the ablest child the exercise he needed.

3. State how you improved the work of the least able child without destroying class interest or lowering class standards.

Oral

1. What steps have you taken to provide your pupils with an interested audience for oral composition work?

2. What individual or group work have you done to insure good oral composition?

3. How have you used the blackboard in oral composition?

4. How have you found it possible to secure progress toward more correct speech without interfering with spontaneity?

Conference XIII

Physical Training

Written

1. Choose one or more of your pupils who are deficient under one or more of the following heads:
   a. Posture habits
      1. Well poised head
      2. Broad high chest
      3. Erect trunk
      4. Weight forward
   b. Motor habits
      1. Prompt response
      2. Accuracy
      3. Strength of motor contraction.
2. If, after studying these deficient pupils, you dealt with them in class exercise, tell exactly how you did it.
3. If you have used team or group work or have given individual instruction, tell exactly what you did in each case.

Oral

1. What do you do when a small number perform an exercise badly? A large number? One?
2. What incentives have you found effective in your effort to get vigorous work? To create play spirit?
3. Present for discussion any puzzling case that comes up in your study of individuals for the written exercise.

Conference XIV

Geography—History

Written

1. Give a lesson in one of the subjects named above. Let your lesson end with a short written test.
2. Write out the questions.
3. Tell how many answered each question correctly.
4. Make a carefully detailed lesson plan for the next lesson on the subject. Show by reference to the children's papers that your lesson plan, if followed, will give to each pupil the instruction he needs and will waste no one's time.

Oral

1. If the first lesson about which you have written involved the oral reading of text by the class, tell exactly how you amplified or questioned to induce the children to imagine or realize the facts. What points did you emphasize? By what means did you make them stand out?
2. If the lesson involved the use of material or maps, tell exactly what material was used and how it was used.

Conference XV

Drawing

Written

1. Choose from a set of drawings made under your supervision those in which the child's last effort was worse than his first. Tell briefly in what respect each paper was unsatisfactory.
2. If you could give the lesson over again, how would you prevent this from happening?

Oral

1. How many drawings do your pupils make during one drawing lesson? How do you decide?
2. How do you provide for improvement in the successive drawings?

Conference XVI

Penmanship

Written

1. In the first written lesson you give this week, note the children who are deficient under one or more of these heads;
   a. ability to take good posture
   b. ability to maintain good posture
   c. ability to use correct movement.
2. Tell concerning each child what you did for him during subsequent lessons and the result.

Oral

1. What plan have you used to prevent children who fail to maintain good writing position from continuing to write in bad position?
2. How do you induce pupils to write better when they make a second line of the same exercise?

Conference XVII

Teaching. (A Summary.)

Written

1. State all the ways for avoiding "lock-step" teaching suggested in this term's work in note book, class discussion, written criticism or interview.
2. Describe the lesson given by you this term, in which you most nearly provided every child with exactly the work he needed.

Oral

1. Why do your pupils obey you?
2. Why do your pupils put forth effort?

The following exercise is a sample of the sort of guidance given to pupil-teachers who show marked deficiency along specific lines:

SPECIAL EXERCISE FOR A STUDENT INCLINED TO DOMINEER

Write this exercise every day for a week.

Watch yourself from two-fifty till the children are dismissed. As soon thereafter as possible, write down all you can remember having said during that ten minutes.

How many remarks were unnecessary?
How many remarks were repetitions of commands?
How many were commendatory?
How many were reproving?

I. Character of commendation.
   1. Did you commend often enough to minimize discouragement?
   2. Did you commend so as to
      emphasize exactly what was good?
      leave in the mind of the child commended a desire to do better yet?
   3. Did you make use of a smile and nod of approval?

II. Character of reproof.
   1. Did you avoid all unnecessary reproof?
   2. Did you reprove with impressive gravity?
   3. Did you administer punishment justly?
   4. Did you give reproof in private when possible?
   5. Did you make use of a reproving shake of the head?

III. Character of commands.
   1. Were your commands reasonable?
   2. Did you succeed in giving each command once only?
   3. Were your commands given in a quiet forceful manner?

IV. Character of children's response.
   1. Did your pupils obey exactly?
   2. Did they obey promptly?
   3. Did they obey willingly?
   4. Did they smile at you readily?

At the end of the week examine your exercise papers and state in what respects you have made your greatest improvement.

THE INTRODUCTION INTO PEDAGOGY OF SOME USEFUL PSYCHOLOGICAL STATISTICAL CONCEPTS

By Samuel W. Fernberger, Clark University

Some years ago, Crampton (2, 3) published a number of exceedingly interesting observations on the distribution of pre-pubescents, pubescents and post-pubescents for the different ages. Crampton's main thesis was that we should not consider, as of primary importance, the chronological age of the school child, but that we must rather consider the physiological age. This is necessary, because the results show that marked variations in height, weight, strength and scholarship occur when we compare the groups in different stages of pubescence for the same ages.

These observations were made on 3,835 boys at different ages from 12.25 to 18.25 years.[1] The percentage of each of the classes of pre-pubescence, pubescence and post-pubescence are given for half-yearly groups. Although the correlated findings of weight, height and the like are of exceedingly great importance, nevertheless we shall consider in this paper only the distribution curves of the three categories for the different ages.

Crampton introduces his longer article by a paper on statistical methods.(1) In this paper, he considers the value of a statistical treatment of problems of this kind and discusses briefly such considerations as the index of variability, frequency distributions and the like. The author is quite right in his excellent treatment and in his emphasis of the value of the application of statistical methods to problems of this sort. We shall try and show, however, that a still further statistical treatment will materially increase the value of these results.

Crampton has plotted his percentage results for the different ages in the form of curves. The ages, at half-year intervals, are laid off at equal distances along the abscissa while the percentages are erected as ordinates. The curves are, of

[1] In the first article mentioned, which is a syllabus of the later and much longer article, the number of observations recorded is 4,800. This is probably a misprint as the percentages of the different stages of pubescence are the same in the two papers.

course, three in number; one curve for each of the three categories considered. The frequency curve for pre-pubescents starts in, at the lower ages, with high values and falls at first rapidly and then more slowly until it reaches the abscissa. The curve for the post-pubescents has an exactly opposite course; starting at the lower ages with low values, rising at first slowly, then more rapidly and finally more slowly again until the values reach a relative frequency of unity. The curve for pubescents is, however, very different in form. It is of the true bilaterally symmetrical, bell-shaped Gaussian form. It starts with low values at the lower ages, rises to a maximum, then falls away slowly, then more rapidly, and finally again more slowly until it reaches the abscissa. An examination of these curves shows that they are not complete as they are not extended enough toward the younger ages,—the curve for pre-pubescents stopping at a relative frequency of 0.81 (12.25 years), that for pubescents at a value of 0.16, and that for post-pubescents at 0.02. As far as has been determined, however, the curves are perfectly symmetrical. One is impressed with the regularity of the curves; and indeed, this is one of the very best indications of the excellence of the data and of the sufficiency of the number of cases considered.

Once these curves had been constructed, however, the author made little use of them in his discussion. He rather discusses the frequencies themselves upon which the curves are based. These frequencies appear in the following table.

RELATIVE FREQUENCIES OF OCCURRENCE FOR DIFFERENT AGES OF VARIOUS STAGES OF PUBESCENCE. (FROM CRAMPTON).

	12.25	12.75	13.25	13.75	14.25	14.75	15.25	15.75	16.25	16.75	17.25	17.75	18.25
Pre-pubescents.	0.81	0.69	0.55	0.41	0.26	0.16	0.09	0.05	0.02	0.01	0.00	0.00	0.00
Pubescents.....	0.16	0.25	0.26	0.28	0.28	0.24	0.20	0.10	0.04	0.04	0.02	0.00	0.00
Post pubescents	0.02	0.06	0.18	0.31	0.46	0.60	0.70	0.85	0.93	0.95	0.98	1.00	1.00

Let us quote in this connection the following from Terman's (6) discussion of the results. "The above curves show that 17% of the boys whose ages fall between 12 and 12.50 years have already entered upon the pubertal transition and that by 14 years the number has increased to 70%. Further, that about 4% of the boys have completed the transition by 12.25 years and by 15.75 years about 80%. At 13.75 years, or about the beginning of the high school period, the number of pre-pubescents, pubescents and post-pubescents is almost exactly equal." Such a series of statements may be more or

less true, and indeed, of considerable pragmatic value. Terman's discussion, however, is loose and far from accurate, as a consideration of the actual percentages will show at a glance. And certainly, complete and detailed accuracy is essential in any statistical consideration. The greater the degree of accuracy and exactness of the final values obtained by statistical treatment from our raw data, just so much greater will be the significance of those final values.

One of our students, Mr. R. B. Teachout, A. M., called our attention to these curves and pointed out the resemblance between them and the form of the so-called curves of the Psychometric Functions, well known in psychology. These curves of the Psychometric Functions represent the relative frequencies for the various categories of judgment as function of all the different intensities of the comparison stimuli in the determination of the sensitivity of a subject. By an empirical determination of a number of points for these curves, one is able to calculate the height of the curve at *any* point. These curves of the Psychometric Functions are identical in form with the curves for the frequencies of the different stages in puberty; the curve for the less judgments corresponding to that of the pre-pubescents; the curve for the greater judgments corresponding to that of the post-pubescents, and that for the equal judgments corresponding to that of the pubescents. In psychology, curves of the Psychometric Functions of this general form are known by fairly wide experience and have been proven to fit the facts of observation for several sense fields. This correspondence with the observed facts was determined for lifted weights by Urban (8); for sound intensities by Urban on the basis of Keller's results (9); and for judgments of the lengths of lines by Maxfield. (5)

These considerations underlie the Method of Constant Stimuli. For proper application of this method several conditions must be met. The first and most important is that the number of categories considered must be odd in number, and that such categories must be mutually exclusive. The determinations must be made for values along the abscissa which are extended enough so that the "tails" of the curves may be determined to at least a reasonable extent. If the increments are equidistant, the calculations are exceedingly shortened. Inasmuch as the categories are mutually exclusive, the frequencies for all of the categories for any value on the abcissa will add up to unity. Hence, only two curves need be calculated since the third may be obtained by subtracting the sum of the frequencies of the other two curves at the different points on the abscissa from unity.

In such a treatment, the two extreme categories are treated separately. From the observed relative frequencies of the greater and less categories (post-pubescent and pre-pubescent in this case) two values h and c are calculated.[2] These values are of great significance as the size of the h determines the steepness of the curve, and the size of the c determines the position of the curve on the abscissa. The larger the size of the h, the steeper will be the curve; and hence we may consider this value as a Coefficient of Precision as it obviously indicates the degree of scattering of the results. As the value of the c increases in size the entire curve is pushed to the right along the abscissa.

Once these values of h and c have been obtained for the two extreme categories, they may be used to very great advantage. This is apparent when we know that the relation c/h defines the threshold; the upper threshold if the h and c of the greater category have been used, the lower threshold if we have employed the h and c of the lesser category. These thresholds, let it be said at once, are entirely arbitrary. The upper threshold is that point on the abscissa where the curve for the greater category assumes a value of 0.5. In our present example it would mark that age where just 50% of all of the cases would be post-pubescents. The lower threshold is that point on the abscissa where the curve for the less category assumes a value of 0.5; or in our present example, that age where just 50% of the children would be pre-pubescents. The distance between these two threshold values is the Interval of Uncertainty. In other words, the two thresholds mark the boundaries between which no one of the three categories will be represented by 50% of the cases for any value of the abscissa.

Still one other value of importance may be calculated from the values now at hand. This, in psychology, is the Point of Subjective Equality and is determined by the expression $\frac{c_1 + c_2}{h_1 + h_2}$. This determines the point of intersection of the two curves of the extreme categories. It has been shown by large experience that this value corresponds very closely to the highest point in the curve of the middle category. Hence this value marks the most probable point of the highest frequency of our middle category.

[2] In this short paper we cannot go into the actual methods of calculation of the various values. These methods of calculation have been carefully and clearly described. The reader is referred to Fernberger (4) and to Urban (7). The calculations by these methods are fairly intricate but the labor is greatly reduced if the results are in such a form that Urban's tables, quoted above, may be applied.

We pointed out above that Crampton's results conform to all, with one possible exception, of the requirements for the application of the procedure of the Method of Constant Stimuli. These results fall into three mutually exclusive categories. The age increments are equally distant and odd in number. The smoothness of the curves shows that a sufficient number of determinations have been made. One of the requirements for the actual application of this method is that an equal number of determinations should be made for each increment. This was probably not the case in Crampton's investigation; at least the number of increments do not divide equally into the number of reported observations. However as we are dealing with observed *relative* frequencies, we may waive this objection and use these results for an example.

By submitting these data to the calculations, we obtain the following values:

Coefficient of Precision of Pre-pubescents....	0.51630
Coefficient of Precision of Post-pubescents....	0.55726
"Threshold" for Pre-pubescents	13.424 years
"Threshold" for Post-pubescents	14.478 years
Point of Highest Frequency of Pubescents....	13.971 years
Interval of Uncertainty	1.054 years

We first note that the Coefficients of Precision for the pre-pubescents and the post-pubescents are almost identical, or at least very similar. This means that the two curves have approximately the same steepness. In other words, it means that the rapidity of the onset of puberty for the different ages is about the same as the rapidity of the completion of the period of puberty for the different ages. The fact that the point of highest frequency of pubescents falls at 13.971 years is also of interest as being a most exact and detailed determination. The interval of uncertainty of 1.054 years is really a measure of the sensitiveness of this group to this transition stage. If, in some other group, we found that the interval of uncertainty was larger, it would mean that the period of transition was relatively longer for this second group. The values of the thresholds are, perhaps, of greater interest and value. We find that at 13.424 years just 50% of our group have failed to reach the stage of puberty; and that by 14.478 years just 50% of our group have passed through that stage.

Inasmuch as we are dealing with relative frequencies found on the basis of a large number of determinations of the occurrence of certain events in the past, we may consider these in the nature of probabilities of the occurrence of these events

in the future, provided that there has been no change in the conditions. Hence our thresholds gain new significance, and we may redefine them in the following manner. The upper threshold is that age at which, *under our given conditions,* we may expect post-pubescents with a probability of 0.5 or in 50% of the cases. Similarly, the lower threshold is that age at which, *under our given conditions,* we may expect pre-pubescents with a probability of 0.5 or in 50% of the cases.

But our conditions do not remain the same and it is for this reason that the measures and values discussed in this paper are of great significance. By means of these values, conventional but still most widely accepted and exceedingly well understood mathematically, we may obtain a direct measure of the effect of changes in the conditions on the various categories under consideration. For example, Crampton discusses the differences in the onset of puberty between Italian and American children. Also he discusses similar effects between children born of foreign and of American parents. This he does on the basis of a consideration of the percentages for each age and of the frequency curves. His discussion, however, appears to lack a desired degree of definiteness and enthusiasm. This is to be expected, inasmuch as the values which he is discussing lack sufficient definiteness. It would be very much more worth while to select a certain point on the curve, as we have arbitrarily selected 0.5 for the curves of the two extreme categories, and study the movements of these points as well as the magnitude of the constants which determine the shape of the curves and their position on the abscissa. In a similar manner, by comparing these values one could study the effect of nationality, climate, diet or what not upon the various stages of puberty. To study the effect of climate, one would determine the relative frequencies on the basis of a sufficient number of determinations, of the occurrence of the different categories and for the different ages for two groups under the different climatic conditions. Then one could at once compare the values derived from these functional curves.

But the introduction of these methods and of the concept of the thresholds, we believe, will have a wider application than we have thus far indicated. There are many factors which undergo stages of transition in the development of the child which are capable of treatment by these methods. Let us take a single example. There is evidence that the eye of the infant is hypermetropic and that, as the child grows older, it passes through a stage of emmetropism and finally becomes myopic. It is of exceedingly great practical interest to know if school-work has any effect on the rapidity of this change.

The determination of the fact that school-work is exceedingly potent in bringing about this change more rapidly might lead to more or less of a recasting of our school curriculum for the lower grades. By the application of the procedure of the Method of Constant Stimuli and by the introduction of the concept of the thresholds, we could gain an insight into this and into similar problems with a degree of definiteness which could never be obtained from a mere inspection of the raw frequency curves.

We have shown, then, that several sorts of data of interest in pedagogy and in hygiene are of such a nature that they may be subjected to the treatment by the procedure of the Method of Constant Stimuli. The age-frequency of the different stages of transition of puberty, or of the transition of the eye from a hypermetropic, through an emmetropic, to a myopic stage are examples of the sort of data which may be given this kind of treatment. We further believe that by using such methods and by the introduction of such concepts as the thresholds and the coefficients of precision, which follow directly from them, we can express the results with a degree of definiteness which can never be hoped for in a discussion of the mere raw frequency curves. The thresholds are in the nature of probabilities of the occurrence of an event *under the given conditions;* and hence we have, by a consideration in the changes in the size of these magnitudes, a direct measure of the effect of any changes which may occur in the conditions. Such a measure is obviously both of great theoretical and practical importance.

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SOME PSYCHOLOGICAL ASPECTS OF WAR

By Clyde B. Moore, Clark University

One of the primary interests of living beings has been the business of killing. No matter where in the scale of life we select a type—be it a low or higher form—this element seems to be present in animal life. Cannon (18) points out that "it is in the highest degree natural that feelings of hostility often burn with fierce intensity, and then, with astonishing suddenness, that all the powers of the body are called into action—for the strength of the feelings and the quickness of response measure the chances of survival in a struggle where the issue may be life or death."

The history of the race teems with examples of "these feelings of hostility" that are "called into action." Man is essentially a killer. Apparently he has exercised this function in every possible direction. He is a fighter—pugnacious and such a social psychologist as McDougall (39) asserts that there is no reason to believe that the instinct for fighting and killing has grown weaker through centuries of civilization but that rather the opposite is true. In the long process of racial growth—and in the overcoming of other animals—man has been the successful killer. He has proven his superiority not so much because of his so-called reason but because of his destructive power. Apparently he delights in killing the higher forms rather than the lower. The theory is advanced that the primary reason for our having the quest for the "missing link" is because man has killed him. He finds the killing instinct surging up more strongly as his foe or victim is advanced along the scale of life. The extermination of primitive peoples by the so-called civilized was very slow at first but after a reaction set in and the primitive people learned the art of killing—if such it be—then the process is rapid and the plans become more elaborate. The extermination of certain tribes of the American Indians serves as an example. The professional Indian scout or fighter was a sort of a specialist or post-graduate in the art of Indian killing and only disappeared as such when the Indian was beaten into submission and by his submissive attitude took away the pleasure of the fight.

McDougall asserts that it is stronger in European peoples

than it ever was in primitive man and this is not a comment contemporaneous with the European war but appeared in 1908 as a part of the results in his study of society from the psychological viewpoint.

Apparently man in his evolutionary trend is being held more tenaciously by this instinct of fighting and killing. Chamberlain (10) says in his "Foundations of the Nineteenth Century," "The most ingenious dynamo machine does not raise men one inch over the earth surface which is common to all creatures; all such things denote merely a new accumulation of strength in the struggle for existence; man becomes thereby in a way a more highly potential animal." The developments in Europe during the great European war seem to substantiate these claims of both Chamberlain and McDougall and specific illustrations with which the literature is freighted only add emphasis to the plain fact that man is a killer.

If the killing, fighting instinct has in any way been sugar-coated by English magnanimity or German "*Kultur*" the reports from the trenches fail to corroborate it. Nor can we only point a finger of scorn at Europe. In our fair America who—in the calm of sane thought—can point with pride to the wholesale devastation and its accessory effects in Sherman's March to the Sea or to the abominable conditions existing in Andersonville and Libby prisons during our Civil War? And here it was a war not only within a race but within a nation and in some cases within the bonds of family ties.

During the past fifty years there has been marvelous progress in many lines. Much has been said and written concerning it. The moralists have attempted to show that the days of war and contention are all but a thing of the past. They acclaim with a liberal interpretation the words of the prophet, "And they shall beat their swords into plowshares, and their spears into pruning hooks; nation shall not lift up sword against nation, neither shall they learn war any more." This oriental poetry and the ecstatic moods of those who repeat it may point to a "consummation devoutly to be wished" but which is subject to the inertia of the philum.

Relatively the instinct to fight has not undergone such a vast change. The great change has come most recently in the fighting machinery. Machine guns, aeroplanes, submarines, bombs, howitzers, deadly gas generators, giant siege guns, wireless telephones and telegraph have been fashioned into a mighty vehicle of war that serves to express this instinct as never before. The fighting attitude prevails. It always has prevailed and the end is not yet.

The attitude to fight and to kill is deeply ingrained. Pow-

erful instincts and emotions seize upon individuals in groups and "spread like wildfire into larger and larger aggregations of men, until vast populations are shouting and clamoring for war." Says Cannon—"To whatever extent military plans are successful in devising a vast machine for attack or defense, the energies that make the machine go are found in the last analysis, in human beings who, when the time for action comes, are animated by these surging elemental tendencies which assume control of their conduct and send them madly into conflict."

In all this recital of fighting and killing and wanting to kill and the suggestion that the trend is becoming more pronounced the question as to why it is or why it should be is forced upon us. We have been taught from parent, teacher, press and pulpit that all this is wrong. From the decalogue to the details of a city ordinance or perhaps to the precepts of teacher and parent, "thou shalt not kill" or "thou shalt not fight," has been the guide. What is it that tramples under foot these tenets that we have long held sacred? Why does McDougall or any other suggest that as our civilization advances we become more prone to kill? Why does he refer to Europe, the center of our best in civilization, as the place where the tendency is most pronounced?

It is not in the approval of national laws. Even international laws and treaties seem to be formed to prevent it. The school, the church, the press, all apparently teach that killing is the one thing to be abhorred and all in all the consensus of public opinion seems normally against fighting, against killing, against war. If all this be true where may a cause be found. Titchener says (59), "We come, again and again, upon evidence that our own determining tendencies are inherited." Man is termed a rational being, but no amount of training and culture can obliterate instinctive tendencies. Perhaps the highest and best training should not attempt any such thing. At any rate the instincts are present and active. The fighting instinct is easily aroused. But where may we find the thing that so deeply stirs the soul? Is there an instinct or group of instincts that in the final analysis produce war? There are such instincts, though they may not be commonly recognized.

President G. Stanley Hall (23) postulates the two poles of experience as being brought to a focus in the sense that all fears and phobias, on the one hand, are ultimately the fear of death, or thanatophobia, while at the other we have the culmination of all desires and wishes in the gratification of love. "The one is the great negation, and the other the supreme affirmation of the will to live." These two poles of

experience mark the boundaries of the known span of life. In the final analysis the motives of the folk soul are here to be found. Man instinctively fears death. It is his philogenetic inheritance. All that he does—all that he aspires to do and to be is motivated largely by this ingrained fear. This fear must not in any sense be limited to the individual, as such, but it is rather the consummation of all racial contributions. Were it of mere ontogeneric origin, it would mean nothing, but as a product of the race, it is all important.

Accepting President Hall's postulate, let us observe man's reactions in all that relates to the great complex act of living. Why does man live? Why does he seek life? Why does he aspire to the most complete life? He is a product of the race that has avoided the pole of death and sought the pole of love and life. Man wills to live. He is driven from the pole of death to live life in all its fullness. It is "the supreme affirmation of the will to live" that is motivating man. His tendency is to live life the deepest, the broadest, the longest, and the best possible. He removes from death just as far as he can. Death is primarily negative, and he wants to escape it. At his best he is intoxicated with the great act of living. The slightest thing that detracts from this fullness of life is a pull in the opposite direction. It may be ever so slight, but in the final analysis it is at bottom, death. This is the thing which man fears. The slightest ill health is a detracting force and he attempts to throw it off.

Instinctively all fear death. We use every possible means to ward it off. We enrich life in every way we can. Our culture is for the purpose of enriching life. Life at its maximum is the goal. Our hygiene; physical, mental and moral is designed to make life the best. The science of medicine is to sustain the normal. The art of the physician is to transfer pathological conditions into the normal. The theologian goes even beyond the known span of life to show the delights of a supernatural life. The philosopher offers his interpretation of life that we may have life more abundantly. The artist depicts the choicest bit of beauty that his skilled eye and dexterous hand can furnish. The musician enriches life with his harmony. The happiest, fullest, richest life—physically and intellectually, is the goal of our culture. Anything that does not contribute a means to this end we fear. We want to live. We love life. We fear death.

The fear of death is increasing in proportion to our abilities to live. Never has life been held so precious as at the present time. Never was death so feared as now. The motive for our great social and economic unrest that we are now experiencing is the desire to live. "Life was never so rich

and joyous as now," says President G. Stanley Hall. We find our penal codes relaxing a little that life may not be untimely cut off. Society is readjusting itself that all—both rich and poor—high and low—may have life and have it more abundantly. The contributions of hygiene, sanitation, education, recreation and amusement have been to make life the sweeter. Man wills to live and all his efforts are given that he may live at his best.

The gregariousness of man leads him in this direction. He is a unit of a social group. He is constantly considering how the activities of his group will affect him. He is a part of it and the desire of the individuals to expand in living the fullest possible life becomes a factor in the group.

The tendency of the group or crowd is to expand indefinitely. This tendency is checked only by the influence of what Conley (11) terms the over-crowd, i. e., we come eventually to a group or crowd that is inclusive of all other groups and because of this it takes precedence over all others. The nation at present is the standard over-crowd. In America, for instance, a state cannot be so constituted as to in any way go beyond the federal constitutional limits. The corporations, both private and public, are restricted by the state while the individuals within these have still a closer restriction. It is through these series of groups from the individual up to the great over-crowd or nation that the instinctive tendencies of man as a unit of society manifest themselves. The tendency of the individual becomes, in so far as it can, the tendency of the group, as such. The individual aspires to the fullest possible life. He obtains it save as he is restricted by the first group, possibly the family. This group in turn aspires to the fullest life for it and in turn is limited by a still larger group. Eventually we come to the national group which seeks the fullest possible national life, and here, as society is organized today, the all-inclusive group ceases.

The nation in theory is responsible to no one. It has no superior group or over-crowd. The nation, however, has characteristics similar to those of the individual and the smaller groups. It wants life. It wants a national life and that in abundance. A nation as a nation loves life—national life—and fears national death. With the tendency of the group or nation to constantly expand and with its love of national life and fear of national death, what must ultimately result? In the end one nation must clash with another. It may be in treaty or it may be in war, but in the final analysis the clash comes. As yet there is no all-inclusive over-crowd. If a world federation could be accomplished this would serve to complete the series of precedence from individual to an

all-inclusive over-crowd. So far as this social scheme is concerned, it would then be complete.

However, we have not gone that far. We have the nation as the largest group. Our conception of the world's history is very largely in national units. The ultimate social structure is commonly considered the nation.

It is a unit to the extent that we speak of national policy, national ideals, national customs and national life. What do these expressions mean? Why do we apply these attributes to a nation? Because it is a great organism with attributes very similar to those of the individual. We might even speak of a national soul. This great social organism loves life and fears death. It will expand and live the fullest national life possible until it is curbed by contact with other nations.

The tendency for the nation to expand is accepted. The ultimate contact with other nations is inevitable. From the moment of contact the national life is restricted in its expansion. Its natural tendency is checked. It must decide which will contribute most to its life—the avoidance of resistance to the restricting neighbor nations, thus averting war, or whether the resulting internal restriction, decay and atrophy is a greater price to pay for national life at its best than is the price of war. Here we find the nation facing two dangers—internal decay on the one hand while on the other external repression and restriction.

In the final analysis a nation must meet these fears. The one is internal, the other is external. Both are repressive and prevent the fullest national life. The nation determines which fear is greatest. If it be internal decay and death it will react in such a way as to escape it. This can only be by removing the cause for repressing its growth and expansion. This cause is another nation. When this reaction comes, if it is war—international war. Its purpose is to preserve national life.

Now the normal reaction to fear is usually anger. An individual may cower from fear for a time, but eventually anger results and he turns and fights. Apparently the fear begets anger and pugnacity. President G. Stanley Hall, Cannon and others say that anger is the one emotion into which all others tend to pass. It is easy and natural for fear to pass over into anger.

Anger is a great primary emotion. It is closely related to muscular action, according to Cannon, and the result is muscular expression. Man becomes angry and then fights. Anger stirs men to action. James (30) in his "Energies of Men," shows that anger may serve to collect great reservoirs of power. If a man has a great task to perform let him

become angry and he consummates it with ease. It gives him his "second wind."

As it is with the individual so it is to a great extent with a nation. A national fear passes over into a national anger. Great "reservoirs of power" are formed and the nation as a unit, saturated with anger, hurls itself against another. The result is war. It is a most natural development. The neutral nation,—or at least those of a neutral nation sustained by the scholar's poise,—looks upon the clash much as a thoughtful bystander looks upon a fight between two individuals. To the psychologist the motives in either case in the final analysis are identical. There has been the old fear of death and the emotion has passed over into that of anger and fighting and war are the natural results. Anger may not always express itself in fighting. Indeed it may be sublimated to a different channel in a majority of cases.

But be that as it may, we do find in anger a powerful motive. Much has been said derogatory of anger. No doubt the comments and warning have served a good purpose, but such a powerful emotion having such far-reaching effects demands more than passing attention. Careful students have found that the normal expression of anger—or the sublimation determined by the individual and his environment is good. It may not at first seem evident, but a careful psychoanalysis will reveal that some of our best products in various fields owe their origin largely to anger. A common illustration is that of the impassioned orator. The artist, the sculptor, the musician are motivated by these instincts. The king in finance, the statesman, the engineer, the educator, the clergyman, all are most productive when able to swing in the greatest arc between the poles of experience. He who comprehends most completely the two extremes is best fitted for the great act of living. It is the effect of fear and anger both on the individual, as such, and again in the group that is fundamental to this theme.

It has been shown that both the individual and the nation loves life and fears death. It has been shown that the emotion of fear tends to pass into anger. Anger is a great motivating emotion which may drive not only individuals separately but as a group or nation into attempting and accomplishing great tasks. It is in these emotions and their expression that we find a cause for war. It is natural and normal. Man is a killer. The history of his race is written in blood. Historic man has apparently developed this propensity as rapidly as any other. At any rate it is still present and the world's history is one long account of battle and warfare.

The Christian era has not changed the scheme. Nor should it, if it is the sublime expression of the folk-soul. It is often spoken of as the "gospel of peace," but a careful scrutiny of some of the choicest products of the Christian religion teems with ideas derived from war.

The acme of peace is said to be in the teachings of Christianity. "Peace on earth, good will to men," has been heralded for nearly two thousand years. "Love thy neighbor as thyself" has been a foundation stone in the structure of the Christian Church. Unselfishness, meekness, "turning the other cheek" and the giving one's coat to him who steals his cloak. But concomitant with all these there has remained a spirit of warfare that has permeated the order of service, the sermons, the organization, the hymns and the prayers. The glamour of war has stamped itself so indelibly on mankind that even the Christian religion has interwoven its contributions with the teachings of Jesus. No one is surprised when people are exalted to ally themselves with the "army of the Lord"—"Onward Christian Soldiers" is looked upon as expressing the true spirit of the Christ. "Lift high His royal banner, ye soldiers of the Cross" has the dash of the military parade rather than the humility of ignominious death. Special days of prayer are set apart wherein the blessings of Deity on the armies are invoked. Statesmen, clergy and officers assure their soldiers that they are in the right—that God is on "their" side.

In hymns with a delicate touch may be found the stamp of the war influence as in the last stanza of Julia Ward Howe's Battle Hymn of the Republic:

> "In the beauty of the lilies, Christ was born across the sea,
> With a glory in his bosom that transfigures you and me.
> As he died to make men holy, let us die to make men free,
> While God is marching on."

Here the sacrifice of warfare is directly compared with the sacrifice of Jesus in the great scheme of the Christian Redemption. Jesus himself asserts, "Think not that I am come to send peace on earth; I come not to send peace but a sword." Thus we find the stamp of warfare in one phase or another even in those fields that are commonly conceived of as being farthest removed from war.

With all our culture and civilization, war has not been eliminated. Indeed, in the light of two thousand years of Christian teachings and civilization, warfare seems to have become more pronounced. The most colossal struggle, with the greatest loss of life and treasure, and the worst atrocities, has come with the culture of the twentieth century. At first

we stand aghast at it all. And why? Why is it all so awful? By what standard do we measure? By the new standards of a generation rather than those of the race.

It has been heralded far and wide that civilization has reached the point where war will not be tolerated, and that society is able to overcome such an instinct, as that of fighting, at least by sublimation, and meet the exigencies of human society in such a way as to solve them without the sword. Recently attempts have been made to show that all the teachings evolving from the Prince of Peace are such as to reconstruct society in a way that strife shall be eliminated. To the passive mind the theory may be beautiful. In a final analysis it may be anything but beautiful. At any rate the theory is social and very new. The evolution of the folk soul has been overlooked. Recent interests are largely economic and social and for the most part war is viewed from this environment.

To those limited to this view, war is all that Sherman said it was. It is incompatible with modern civilization, according to the students of society. According to them, the time has come for the settlement of international differences without the use of the sword. Peace tribunals, peace treaties, peace prizes, peace societies have been very prominent within the last decade. They have sought to aid society in the best possible way but apparently have not convincingly presented a successful peace plan to those who have the power to declare war. This is not to be construed to mean that such movements have been failures, but since the events of the summer of 1914, new aspects of the problems have presented themselves. From the standpoint of the student of psychogenesis and psychoanalysis fundamentals have been overlooked. Man has been considered from the ontogenetic viewpoint only, while in the instincts that motivate fighting and warfare nothing short of a philogenetic consideration can be of great worth.

It is most natural that American civilization should tend to overlook the racial tendencies of man. America is a composite nation and very new. Because of her youth her traditions are necessarily recent. But in addition to this short span of time, the growth and expansion have been so rapid and so great that our meagre and youthful traditions have been all but lost. Add to this the influx of immigration from every quarter of the globe and the wonder is that any traditions have survived. As a result there are no racial traditions, language is more diversified than in any other great nation, and with no royalty or ruling family, tradition has been reduced to the minimum.

With all this, together with unequaled prosperity, economic and social progress it is no wonder that man, stripped of his culture, a product of the race and bearing all its imprints, has been overlooked save as he appears in his cloak of civilization. Because of this, war has been little thought of in America. America has thought of peace and with unprecedented commercial development and the resulting international relations, has sown the seeds of peace broadcast.

All was well until the summer of 1914, when in the twinkling of an eye,—to many—the war clouds gathered and a world war such as the world had never seen was precipitated. It was a shock to the civilized world, and more especially to America. It had not been expected—it had not been even dreamed of. America had evolved a standard almost purely economic, that discredited anything that smacked of war. Her teachings were and had always been those of peace and now a world war struck terror in her very soul. It was all terrible. And why terrible? It was out of harmony with American teaching and standards of living. But how old are these new economic, social and industrial standards? Since when has someone proclaimed the "Great Illusion" of economic waste? When was the biological aspect presented showing war a loss to the race? When did the new socialistic wave first sweep over the civilized world? Within about a hundred years. We have a little infant standard of perhaps a century to measure a racial tendency as remote in origin as the race itself. We have, according to Patrick (47), the same old brain of our fathers and forefathers stamped with ancestral traits and primitive instincts which cannot quickly be outgrown. We have splashed on a bit of veneer and the spots from which the veneer may be removed only appear the worse from contrast. There has been a sudden change in society, but the individual is the same. He inherits the philogenetic traits and no matter what society may decree, as society, man cannot quickly and at once put aside racial characteristics.

Man has never been content to labor without reference to his associates. In fact anywhere along the line of civilization there are abundant illustrations of the strong exploiting the weak. Patrick says the modern state is the historical development of the primitive group. There has always been within the group a tendency for the strong to exploit the weak. And yet when the group is threatened by a common enemy, the factions unite as by magic. The exploitation of the weak by the strong perhaps was never more prevalent than at the present time, but here again in the great European war is shown a group loyalty of unrivalled quality. Not only have

the nations become units, but alliances between different races have been made that the great ambition of the nation might be realized.

English and French, though once at enmity, are united as one; Russia and Japan, though recently at war, are allied in a common cause; Germany, with all her Christian civilization, has as her ally the "unspeakable Turk." Never in the world's history have so many of the common bonds such as religion, race, language, color and tradition been broken as in the European war. How are we to explain it? Does any argument approach an explanation as that relating to a recrudescence to the primitive? How shall we explain an annihilation of so many of the contributions of civilization?

Freud (21) says we are too near the European war to pronounce a correct judgment on its meaning. He continues by saying that there has never been any event that "destroyed so much of the precious possessions of mankind!" The clearest minds are confused and even science has taken on a more or less passioned partiality and some have become so embittered that they have flown to arms. The anthropologist thinks his enemies *minderwertig* and degenerate while the psychiatrist has diagnosed the enemy as more or less insane. Freud shows the peculiar difficulty in comprehending in that only the soldier can have first-hand knowledge. But he, if he be a true soldier, and in the thickest of the fight, is in a poor position to furnish us very valuable data. The psychological investigator, on the other hand, must work at long range, with the result that much of the most valuable data cannot be secured. However, disregarding an attempt to analyze this particular war, we do find evidence of the old instincts. The Freudian doctrines sustain the fact that civilized or cultured man possesses the same brain as the savage so far as structure and weight are concerned, and that the difference is functional rather than structural.

War is a recrudescence of the infantile unconscious of the human race destroying for the time being all the accumulations of civilization and culture.

Pfister (49) shows that war is constantly becoming more cruel and that apparently with the advance of culture the recrudescence becomes more complete—that the regression goes farther back and that war becomes more cruel and primitive, that the fighting instinct or war trend may cause a soldier to shoot a father today and tenderly care for his children tomorrow.

It is difficult for people to realize that the war spirit is primitive and that the standards of civilization as used today are for the most part very new. When the culture is stripped

off, however, the war lust is exposed. The fighting instinct, or war lust, is never entirely overcome. Though it may seldom break out, it is only repressed. These instincts are well hidden until there occurs an inhibition of life. Then, says Jung, it is like a dammed stream, the waters of which set back towards the springs and fill up old canals that have emptied.

In an analysis of this regression to the primitive, President G. Stanley Hall raises the question: "What are the kinds of these connections or chains?" and in answering, admirably summarizes as follows: There are three views: 1. Freud thinks that most important are the complications or nodes of the love life that repel regression and make us dependent on the unconscious, on infantile ideas and feelings. 2. Adler says it is due to the loss of clear and free self-determination that arises from physical injury or defect, bringing a feeling of inferiority which arouses the manly protest. According to this, then, it is the need of *Geltung* that plunges man in regression and brings him under the power of unconscious childish impulses. 3. Jung thinks that the bifurcation which subjugates the spirit of domination of unconscious infantile powers is due to the opposition of a tendency of persistence or development. Whoever resists an inner impulse to a high achievement falls under the rule of regression, so that he is a prey to the unconscious primitive archaic thoughts and acts.

While these primitive tendencies—these regressions—may be more or less disheartening to those who conceive the cultured man as the type man, under all circumstances and conditions, still there is a value in the consideration of this recrudescence. The instincts are present and when action in the human being is demanded it is largely the instincts that motivate. When our culture and education are such as to sublimate completely these instincts into the channels of art, literature, music, religion or other phases of culture, then may we hope to use our newer standards.

For a nation, in time of war, anything is right. "All is fair in war." It is apparently ethical for a nation to resort to trickery, deceit, surprise, thieving, ravishing, torturing and persecution. The one aim is to win. National life and spirit is at its highest. Differences within the nation tend to disappear. The group consciousness is aroused, the fighting instinct asserts itself, all the hatred, suspicion and viciousness of the race is revived and a desire to exterminate the enemy, if need be, takes possession. The nation becomes a unit. Nationalism is paramount. Policies that would not be tolerated for an individual or lesser group receive a nation's stamp

of approval. A few individuals deplore the atrocities attendant upon the struggle, but their voice is feeble. The nation is not bound to the ethics of the individual. In a national struggle, what of it if a few atrocities be perpetrated? The nation's life is at stake. Everything transpires under the caption of patriotism which to the mind in passing is all that is good and wholesome. As the clash comes and the fight continues, these outcroppings are overlooked and all are sucked into the great war current. The whole nation is at war—everybody is fighting. All of one nation is the enemy of all in another. Those noncombatants of the opposing nation who are guests or residents in a nation are subjected to direct insults. Even foreign names are tabooed. Never perhaps have nations gone to such straits in these small matters as in the European war. International courtesies are withdrawn. The Germans will not countenance English words or even derivatives. St. Petersburg as a name becomes only a relic. Fortescue reports (20) that in Berlin every English and French name disappeared in one night. The Hotel Bristol, which has a name that is a considerable asset, became the Conrad Uhl after the manager. The Westminster Hotel became the Station House and the Piccadilly Café did a thriving business under the title *Vaterland*. One of the Berlin jewelers who had the time of the world showing on several clocks, is reported to have pasted out the faces of those registering the hour in London, Paris, Petrograd and Brussels.

Even men of broad training became extreme and biased in their comments and praises of their country. M. Hirschfeld (27) raises the question, "Warum hassen uns die Völker?" and then proceeds to answer it by saying that it is a mere matter of jealousy, ignorance and envy on those who disagree with Germany. In short, only merit has advanced Germany while envy and jealousy on the part of other nations have sought to throttle her.

J. W. Allen (1), representing England, on the other hand, in "The Danger of Peace," urges that when peace is declared, "The treaty must represent agreement between us and our allies: not agreement between us and Germany."

Rene Doumic (18), in an address given before the Institute of France (which includes the world-famous French Academy) apologizing that he must appear in academic costume rather than in a soldier's uniform, declares that French history is but the history of French valor.

The natural law to which all laws of nature can be reduced is the law of struggle. All that we have and hold most dear is at bottom the result of struggle. This is true both of the individual and the group. Says Clauss Wagner, "The in-

ternal development, the introsocial struggle, is man's daily work—the struggle of thoughts, feelings, wishes, sciences, activities. The outward development, the supersocial struggle, is the sanguinary struggle of nations—war. In what does the creative power of this struggle consist? In growth and decay, in the victory of the one factor and in the defeat of the other! This struggle is a creator, since it eliminates." (Clauss Wagner, "Der Krieg als schaffendes Weltprinzip.")

War is the great unifier of a nation. The first tendency on the part of man is to assert his own rights, but in a great social struggle the self and under group lose their identity and all fall in for the national struggle.

Who is regretting the work of the soldier in time of war? Not the soldier. Many a young, virile man does not volunteer in a crisis until he is sure he will see "actual service." He wants an opportunity to fight.

In the following illustrations and reports one may get a view of the individual's reaction to war. There is a recrudescence of consciousness and social and ethical standards are shattered. A sort of "war complex" is established. Barbaric traits appear as the war spirit develops, and there is a general reversion to the primitive.

Richard Harding Davis (14) reports how quickly and completely men became accustomed to war. It becomes a business. War becomes a series of commonplace incidents. There is a regression to the primitive and such an incident as self-preservation becomes the motivating factor.

Carrington (9) has made a study of what the soldier going into battle thinks. He raises the question as to what occupies the soldier's mind while in the trenches. What feelings animate him when he attacks, charges or thrusts his bayonet into the flesh of an antagonist is the question. Just how is the civilian transformed into the soldier? He postulates two zones—a "war-zone" and a "civil-zone," the first shading off into the second. He gathers his data, so far as possible, from the soldiers while within the "war-zone" before the influence of the "civil-zone" may exercise a bias. He first makes a study of the "rest-camps" Cantonment. Here the soldiers have a co-operative community life.

The greater part of the activities are manual, however, and Carrington points out that the activities being so largely manual and so circumscribed, tend to make the mind simple, primitive and almost vacuous. The soldier makes little or no attempt at original thinking, but depends upon the officers. He tends to become a "cog in the wheel." In fact, initiative on the part of the soldiers is not to be desired. That is for the officer. In going toward the front the confidence of the

soldiers increases. There is a unifying of the group and all believe that they are sure to succeed. This confidence seems to increase in a direct ratio as the front is approached.

In the trenches there may be momentary pangs of fear or uncertainty, but the presence of comrades, for the most part, dispel them. Here, amid the scream of shells, the rain of bullets and the sight of blood, the wounded and dead—"familiarity breeds contempt." In the movement of troops there is such a unity that the individual vanishes, as such, and he believes his safety lies in acting in unison with his associates—personal psychology gives way to the psychology of the crowd. The soldier enters the trenches as a matter of course.

A young corporal reports: "I am not sure that I thought of my family particularly, even when writing home! There seemed somehow to be a veil between us, shutting off all communication of feeling and interest between us." In the isolated trenches farthest to the front, the mind becomes even more empty and blank. The great danger here apparently is the morale of thinking of being deserted by other parts of the army. In the attack, the soldier is conscious only of the self. Country, family and God may form a subconscious background, but the conscious thing is the avoidance of the "mortal shock." The one object is to destroy the immediate enemy. This becomes so strong at times that the officers can scarcely restrain the men from hurling themselves against the enemy. "When we *all* advance, no one is afraid," reports one soldier. In making a bayonet attack the purpose of every soldier is the complete destruction of his enemy. It is not murder to him—it is self-defense. "Each soldier killed lessens my own chance of being killed." A soldier reporting on bayoneting an enemy says: "I had a curious sensation in my arms as I felt the soft body, and I grew fatigued with continued fighting. But the action was of such short duration and I felt all the time so keenly that I was fighting for my life, and seeking only to preserve myself, by killing the enemy, that I gave no thought of him." Thus culture is, for the time being, swept away and a primitive brute-beast remains fighting with no other ideal than those of his primitive ancestors—self-preservation.

Liddell reports (38: p. 178): "All manner of wounded came along. Those whose wounds were slight helped their badly-hurt comrades on. All the soldiers were dust-covered, sweating and mostly bareheaded. But they were all full of spirit. They looked repeatedly back towards where they had come from, as if reluctant to leave the scene of action. They allowed us to handle their broken limbs and bleeding, gaping wounds without murmuring. They seemed indifferent to

pain. Their eyes still shone bright with the excitement of battle. Their besmeared faces were full of eager interest."

Speaking of the women in the war, Washburn (61: p. 103) tells of a countess acting as a nurse who calmly remarks: "Two weeks ago I could put two fingers up to my hand in this man's brain. Yet we have fixed him up and he will recover." The attending surgeon remarked that this countess had on several occasions remained on duty without sleep or rest for fifty hours.

Fortescue (20) writes of conversing with a "mild-mannered, blue-eyed fat Teuton, the type you expect to see drinking beer and rearing a large family, doing the most bloodthirsty deeds all at the call of the Kaiser." In his recital of his flight over cities dropping bombs on defenseless women and children there seems to be no feeling of cowardice or regret.

Irwin (29: p. 129) reports the trip of an aeronaut as follows: "When you start," he said, "you make up your mind that you're dead. Of course, you will be sooner or later. When they get you and you're four thousand feet in the air, there's no escape. My case (a safe return) just happens to be a miracle. And after you've fully made up your mind to die, it's a glorious sensation! You can't know how cheerful a man feels up there!"

Many imagine that the women at home have but the one interest—that of a safe return of husband, son or brother, and that a wound is only a cause of worry. But witness the following account by Fortescue (20: p. 113) who writes: "When our train approached Berlin, one got a picture of the other side of war. Many little pathetic scenes were enacted at the different stops. The news of the coming of the wounded had been wired ahead. Mothers, wives and daughters gathered to meet their loved ones. I remember one girl —she had the air of still being a bride—almost smothering her husband with kisses. Talking like a runaway phonograph, her eyes never left his face. Her own were lit with pride and love, yet while I watched, she never let her glance wander to the shattered arm her husband covered in a sling. As the train pulled out, I saw her still smiling up at him in rapture, oblivious to the world."

For the most part, these experiences indicate the naturalness of war. It is a matter of course. Man is adapted to war, as he is adapted to eat and sleep. There may be thrills of terror when war is announced, but as time passes, the attitude changes until war is looked upon as a beneficent thing. It is a return to the primitive, and is comparable in many ways to the movement of "back to the soil," save that

the recrudescence is more complete in war than it is in the simple tilling of the soil.

War may be a terrible crucible in many ways, but some of its products are exceedingly valuable and bright. James (31) believes that if a vote were taken to expunge from the history of the United States, the war for the union, only a handful of eccentrics would say yes. The ideals and memories of those days are among the most precious and sacred things we possess. Says James, "Our ancestors have bred pugnacity into our bone and marrow, and thousands of years won't breed it out of us. The popular imagination fairly fattens on the thought of war. Let public opinion once reach a certain fighting pitch, and no ruler can withstand it." War is a sacrament. Both victor and vanquished profit. Militarism is the great preserver of our ideals of hardihood. There is a type of military character which everyone feels the race should breed.

James hopes for peace, but says, "The war party is assuredly right in affirming and reaffirming that the martial virtues, although originally gained by the race through war, are absolute and permanent human goods." "When the contemporary man steps from the street of clamorous insincere advertisement, push, adulteration, underselling and intermittent employment, into the barrack yard, he steps on to a higher social plane, into an atmosphere of service and cooperation and of infinitely more honorable emulations."

This study has led to the conclusion that the fundamental cause of war is not economic, nor the product of organized society, but that in the final analysis, war is motivated by primitive instincts. The emotions of fear and anger and their relation to the "will to live," are philogenetic, ever present, and constitute important factors in the production of war. Furthermore, man is instinctively a killer, and the inhibitions of modern civilization are temporary and a frequent recrudescence or return to the primitive is inevitable. The evidence of the European war has shown that the more advanced the civilization, the more primitive will man become when once the inhibitions are removed and the instincts are unleashed.

To the geneticist and the psychoanalyst, this is commonly recognized, but to those overlooking these factors and holding to a limited economic and social interpretation, there may come a surprise. This confusion, according to our findings, is caused by an attempt to measure primitive instincts, as old as the race, by social and economic standards that have been evolved within a very few years. The failure of this inter-

pretation is self-evident, and we believe that nothing short of a philogenetic consideration can interpret war.

The development of nationalism is fundamentally an action of the group, and the group, as such, retains the psychic characteristics of more primitive times. Our much-talked-of civilization is, after all, little more than an extension of our organs whereby the group may more readily be enlarged and yet function as did the smaller groups of primitive times. By extension of organs, we mean that modern transportation is little more than the lengthening of the legs and strengthening of the back of primitive man; that telegraphy, telephony, and fast mails merely increase his conversational distance and abilities, while modern machinery for producing clothing, shelter and food, and even implements of war, is little more than a perfecting of the arms, hands and fingers of man, who so recently has been limited to the tribe and city state.

It is this external thing that has screened from the eyes of many, man's psychic nature as a product of the race. The curtain has been drawn again and again, but not until the advent of the European war, bursting in, as it did, upon twentieth century culture, did the rude awakening come. Through this war, man's nature was laid bare, and in this exposure were revealed the indelible stampings of the race from his remotest ancestry to the present time. In sustaining these findings, specific incidents have been cited. In these incidents are to be found both objective and introspective data corroborating this view.

Finally, substitutes for war have been considered, and there are elements of value in all that have been suggested, but neither singly nor in composite has an adequate substitute been found. In this respect we can only suggest that when all society has been educated with the full recognition of psychogenetic factors, and when we know more of the successful sublimation of primitive instincts than we now dream of, then, and not until then, may we hope for the passing of war.

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THE RELATION OF SECONDARY SCHOOLS TO HIGHER SCHOOLS IN THE UNITED STATES

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It is generally known that the secondary schools of America were founded to train a governing class—ministers and magistrates. For more than a century the subject matter peculiar to the needs of these persons occupied the attention of secondary schools. Keeping in mind the place of Benjamin Franklin in the world of thought, it does not surprise us that he was the first to question the wisdom of this course for America and to give expression to his doubts in an organized effort to bring about a change. This he did in founding the Philadelphia Academy in 1749. According to Franklin's plan this school was to be a school where the boy or girl in the ordinary walks of life might get the rudiments of English, arithmetic, and the casting of accounts. His efforts were not successful, for Franklin was opposed by those whom he was pleased to call the "Latinists." After this abortive effort the "Latinists" remained in more or less disturbed control of the situation until in 1821, when the Boston English Classical School was founded to meet much the same need as that felt by Franklin and his followers more than a half century before. From that date on the struggle to keep the American high school within the beaten paths of the past on the one hand, and to expand it and make it serve the purposes of the ordinary man on the other, has been, and now is, perhaps the most significant educational question before the American people.

In this struggle the educational conservatists have always had, and still have, for the most part, a very great advantage over the progressives, because they are in control of practically all the colleges of the country, and the American people have an abiding, wholesome respect for the edict of their colleges. The colleges themselves have a respect for each other that sometimes borders on fear—fear that their fellow colleges will consider them below standard. To fall below standard, though it be medieval, is the unpardonable sin among American colleges. This fear they have passed on to the American high school, and the high school has passed

it on to the people. Any one who doubts this should go into any American high school community and ask the first citizen he meets what kind of high school the community has. He will, of course, answer in vague terms, but pin him down to give his very best reason for believing the school to be a good one, and he will finally assert that he must be right because his high school is on the approved list of college so and so, or is on the accredited list of some association of colleges and secondary schools. This is sufficient for most people. They never ask about the basis of accreditation. A threat to remove the high school from the accredited list is sufficient to start a riot among the people of any community; but, ask any one of them why he is so excited about the matter, and he will either frankly tell you that he does not know what accreditation of his high school means, or he may try to convince you that his community is about to suffer a disgrace to avoid which he will go to any length even to advocating those courses exclusively in the high school for which his son or daughter has no need or ability. Better eliminate the boy or girl from the school than to suffer this awful disgrace of being branded as below standard! This is what is happening all over the country. Boys and girls are being sacrificed to a foolish fear which needs to be so thoroughly exposed that it will be obliged to disappear as have the fears of excommunication so powerfully used by the medieval church.

Our peculiar educational system which superimposes one of its parts upon the other has lent itself to the strengthening of the position of the conservatives. Ask any ordinary man again what the purpose of the kindergarten is and he will tell you that it is to prepare for the first grade; what the purpose of the eighth grade is, and he will tell you that it is to prepare for high school; what the purpose of the high school and he will tell you to prepare for college. It is difficult for him to conceive the matter in any other way. And indeed it is not strange, for the whole thing works out that way. The grade below is, in the minds of our teachers, our school boards, our superintendents, in a large percentage of the cases, a preparation for the grade above. This is a false and foolish notion. Once we can conceive the purpose of each grade or each group of grades as the realization of the fullest possible development of the children in the grade or group of grades, not for participation in a future life, but for full and complete participation in the activities of the NOW, we shall have gone a long way toward introducing more happiness and greater efficiency into our public school system.

In their early history the American colleges had their own preparatory schools or depended on private tutoring to fur-

nish them their students. They then formed the habit of specifying in detail what their students should study to fit them properly for the college. This habit the colleges still have in a large percentage of the cases, some of them devoting a large part of their annual catalogues to these details.

The increased demand for a college education, which came immediately after the civil war, gave rise to the rapid increase in the number of colleges, secular and Christian, especially in the West. This centered the thought of the college authorities upon the problem of preparatory or fitting schools. At first these new colleges looked to the established sources which had supplied the older colleges with students; but it soon became apparent that these were not sufficient, and ways and means whereby the rapidly developing high school might be made a feeder to the college were sought. The University of Michigan has the credit, or discredit, depending upon one's point of view, of proposing, in 1871, the plan which has been so widely adopted by the colleges and universities in the United States. This plan involved the inspection and approval of the secondary school by the colleges and universities, thus placing the secondary school's affairs in complete control of the inspecting schools. So long as the high schools could confine their efforts to fitting for college the plan worked without a great deal of friction, but, as community interests grew, developed, and expanded to a point where a course of preliminary training in the high school would be advantageous to the boy or girl who did not intend to go to college, friction between college entrance requirements and community needs was inevitable. Then arose the slogan of the colleges that that which prepares for college also prepares for life, which was soon neatly turned by the liberals into the more psychological and pedagogical slogan that that which prepares for life also prepares for college. That the effect of the formal discipline idea of the college has by no means disappeared will be noted in the following statement of Professor Thomas H. Briggs:

"Improvement in secondary schools is hampered for several reasons. In the first place, a majority of principals and teachers do not possess a philosophy of education which is satisfactorily based on the newer principles of psychology and sociology. A persistent belief on the part of many that because a subject or a part of a subject is difficult or distasteful, it is therefore educative, that habits acquired in one field are surely transferred to all others, and that native individual differences can be ignored or destroyed, makes progress all but impossible."[1]

The two clubs which the colleges of the United States have been able to hold over the high schools since 1871 are the

[1] Report of the Commissioner of Education, Vol. 1, p. 128.

entrance requirements and the accredited, or approved, list. Both of these merge, when in action, into one powerful club, which, when wielded by skillful hands, that are by no means lacking, does its work with neatness and dispatch. As has been pointed out, the communities are rare, but fortunately individuals are less rare, that can and do defy the club and its wielders. This system made it necessary for that keen educational observer, President G. Stanley Hall, to say with evident regret:

"One great interest of most high school faculties is fitting for higher institutions—this was of old the prime purpose—although a steadily diminishing proportion of their pupils ever attain that goal. . . . The high school has profited almost nothing by the new methods of promotion, which are so beneficent in the grades, by which a bright pupil can shorten his course, and, worst of all, some of the recent concerted prescriptions of the college practically require a full high-school quadrennium, as if the amount of work could be measured by the number of years devoted to it. . . . With a better social position than the teachers of the lower grades, protected and sheltered by the college which has done so much to shape it to its own will, and of which it is often the pampered pet, its representatives usually feel immune from all criticisms of the school system as a whole, and are more secure in their positions. . . . The college will not and cannot criticise the high school if only it does its own bidding and fits aright, indeed is resentful if others attempt to do so, and few are competent."[2]

Educational leaders, who have given this matter consideration, are almost of one mind in urging the emancipation of our high schools from the undue influence which the college is exerting upon them under the scheme of entrance requirements plus the accrediting scheme inaugurated by the University of Michigan almost a half-century ago.

One should not assume or even suggest, perhaps, that this plan has been an absolute evil. What an independent development of the high school might have given us no man can say. That we do have a pretty efficient secondary educational system must be admitted, but that it is as efficient as it can be made, or that it has been as efficient as it might have been, had it remained free to develop its own destinies, is another question that must remain in the realm of opinion. But to point to the past or present greatness of the system, as a justification for its undisturbed continuance, is to apply the well-worn brake on progress, "Let well enough alone," and refuse to study the situation in the light of available facts.

College Entrance Requirements

The struggle between the conservatives and liberals in the American educational world is well exhibited in a study of

[2] Educational Problems, Vol. 2, p. 637.

college entrance requirements. Such a study reveals the fact that among the colleges there are two very distinct groups—the extremely conservative and the extremely liberal—and that there is a third group not so well defined, leaning on the one hand toward conservatism and on the other hand toward liberalism. The extremely conservative colleges designate all the work which a student must take to prepare himself for college, and the extremely liberal group specifies none of this work, while the group lying between these two extremes prescribes a median amount of the work for college entrance. To get the matter before us in a somewhat more definite way the following table has been prepared:

TABLE I. Showing the number of elective units that are allowed by 317 American colleges, to students entering the liberal arts courses. (All Teachers Colleges and Normal Schools have been excluded from this list but a few Mechanics Arts Colleges and Technical Schools have been included; in such cases the entrance requirements for the engineering or science degrees have been given.)

Elective units allowed	No. of colleges allowing the units	Percentage of the whole number
0	16	4.2
½ to 1	13	4.1
1½ to 2	23	7.6
2½ to 3	31	9.9
3½ to 4	60	19.2
4½ to 5	52	16.5
5½ to 6	61	19.4
6½ to 7	23	7.6
7½ to 8	15	4.7
8½ to 9	11	3.5
9½ to 10	6	1.9
10½ to 13	3	.9
15	3	.9

From this it will be noted that only 16 or 4.2% of these 317 colleges are extremely conservative and that only 3 or .9% are extremely liberal; and that those that incline most closely to these extremes are likewise limited in about the same proportion. It is interesting to note that 173 or 55% allow from three and one-half to six limited elective units. The explanation of this lies, no doubt, in the influence exerted by tradition, reinforced by imitation and the recommendations of various organizations that have investigated and reported on the matter of college entrance requirements.

If one should make an arbitrary division of these 317 colleges, calling those that allow six, or less than six, units of limited electives conservative or inclined to be conservative, and those that allow six and one-half or more than six and

one-half units of limited electives in the preparatory work, liberal or inclined to be so, some interesting facts are revealed. Such a division places 253 or about 80% of them in the conservative or inclined to be conservative class, and 61 or about 20% in the liberal or inclined to be liberal class.

The following table will give an idea of the geographical distribution of these two classes, which are made, it must be kept in mind, on an entirely arbitrary basis.

TABLE II, showing geographical distribution of colleges designated as conservative and inclined to be conservative, or liberal and inclined to be liberal.

State	No. of conservative colleges or college allowing 6 or less limited electives in prep. work.	No. of liberal colleges or college allowing 6 or more limited electives in prep. work.	Total
Alabama	3	1	4
Arizona	1	0	1
Arkansas	1	1	2
California	2	4	6
Colorado	5	0	5
Connecticut	3	0	3
District of Columbia	2	1	3
Florida	1	3	4
Georgia	6	0	6
Idaho	1	0	1
Illinois	19	4	23
Indiana	10	2	12
Iowa	10	6	16
Kansas	10	0	10
Kentucky	8	0	8
Louisiana	1	2	3
Maine	3	0	3
Maryland	4	1	5
Massachusetts	8	2	10
Michigan	3	3	6
Missouri	5	2	7
Minnesota	4	3	7
Nebraska	6	0	6
New Hampshire	1	1	2
New Jersey	3	0	3
New Mexico	1	0	1
New York	20	2	22
North Carolina	1	0	1
North Dakota	1	2	3
Ohio	27	2	29
Oklahoma	2	0	2
Oregon	3	2	5
Pennsylvania	18	2	20
Rhode Island	2	0	2
South Carolina	7	0	7
South Dakota	5	1	6
Tennessee	10	1	11
Texas	5	1	6

Utah.	0	1	1
Vermont.	1	1	2
Virginia.	11	2	13
Washington.	2	2	4
West Virginia	3	0	3
Wisconsin.	3	3	6
Wyoming.	1	0	1

It seems to be generally assumed that the colleges of the West are much more liberal in their entrance requirements than the colleges of the East. From the above table such does not appear to be the condition in so pronounced a way as has been assumed. Of the 17 states in which there are no liberal colleges, on the assumed basis of classification, nine of them are east and eight west of the Mississippi. One is somewhat surprised that in such states as Kansas, Nebraska, Oklahoma and Colorado there are no colleges that will allow the student to elect, in even limited fashion, as many as six and one-half units of his college preparatory work.

Among the 61 liberal colleges we find, however, the following great schools of the West:

Leland Stanford Jr. Univ. allows practically free election.
University of Chicago allows limited election of 12 units.
University of Iowa " " " " 6½ "
Northwestern University " " " " 7 "
University of Wisconsin " " " " 8 "
University of Illinois " " " " 9 "
University of Missouri " " " " 9 "*
University of No. Dakota " " " " 11 "
University of So. Dakota " " " " 9 "
University of Michigan " " " " 7 "

East we have the following schools that are included in the liberal class:

Clark College of Clark University allows practically free election.
Pennsylvania College allows limited election of 9½ units.
University of Pittsburgh " " " " 9 "
University of Vermont " " " " 9 "
University of Florida " " " " 8 "
Ohio State University " " " " 7 "
DePauw University " " " " 6½ "
Tulane University " " " " 7 "

This is a clear indication that the spirit of more freedom for the high schools is not confined to the West. While these Eastern schools are not relatively so large as those given for the Western states, they have in them a vitality that has been

* Since the above was written the University of Missouri has further liberalized her entrance requirements. It now admits students on somewhat the same plan as Leland Stanford Jr. University.

felt and is being felt in the educational policies of eastern educational institutions.

The following table has been prepared to show the number of colleges that will allow from ½ to 15 elective units in the preparatory work, and the number and percentage in each group which will recognize some vocational work as fulfilling entrance requirements. The amount of such work that will be accredited varies from ½ to 5 units.

TABLE III

No. of credits allowed as electives	No. of colleges allowing indicated electives	No. allowing credit on Industrial work	Percentages in each group allowing credit on Industrial work
0.....	16	0	0.0
½ to 1.....	13	0	0.0
1½ to 2.....	23	3	13.0
2½ to 3.....	31	6	19.3
3½ to 4.....	60	17	29.5
4½ to 5.....	52	23	44.2
5½ to 6.....	61	35	67.3
6½ to 7.....	23	15	65.2
7½ to 8.....	15	13	86.6
8½ to 9.....	11	11	100.0
9½ to 10.....	6		
10½ to 11.....	1	1	100.0
11½ to 12.....	1	1	100.0
12½ to 13.....	1	1	100.0
15.....	3	3	100.0

From the above table it will be noted that as colleges become more liberal in the number of elective units, they also become more liberal in the scope of the subject matter from which such electives may be chosen. A glance at the table shows us that 45, or about three-fourths of those colleges that we have heretofore termed liberal—those allowing six and one-half or more elective units in the preparatory work—recognize industrial training as legitimate college preparatory material. It is also significant to note that of those colleges we have heretofore classified as conservative, only 84 or about one-third recognize such work as permissible entrance material. From the table it further appears that after a college has reached a point where it is willing to let the high school pupil choose, from a limited field, as many as 8½ units of his preparatory work it also is willing that at least some of this shall be in vocational work. The number so recognized by these schools varies from one to five units, but most of them will recognize four or five of such units. This tendency is what gives alarm to the educational conservatives.

To maintain the foregoing standards, colleges, as a rule, have adopted an inspection and accrediting system. In this work they are powerfully supported and assisted by what we shall call

THE VOLUNTARY EDUCATIONAL ASSOCIATIONS OF AMERICA

There are four of these associations in the United States that are directly active in this work and several other organizations that cooperate with them. The active ones are:

1. The New England Association of Colleges, with its active committees, The Examining Commission and College Entrance Certificate Board.

2. The Association of Colleges and Preparatory Schools of the Middle States and Maryland, with its active body, the College Entrance Certificate Board, which, since its creation, has become an independent organization.

3. The Association of Colleges and Preparatory Schools of the Southern States, with its active bodies, the Accrediting Commission and Examining Committee.

4. The North Central Association of Colleges and Secondary Schools with its active bodies, the Accrediting Commission and Board of Inspectors.

In addition to these there is the National Association of State Universities, and finally, an association of all these associations known as The National Conference Committee of Colleges and Secondary Schools.

The New England Certificate Board bases its system of accrediting of high schools on the success of students who attend the colleges that are members of the board. The strict enforcement of these rules, most of which are very arbitrary and some, we think, unjust, has made the Certificate Board the mark of some very vigorous attacks recently. These attacks have resulted in the withdrawal of Dartmouth and the University of Maine from membership in the board, and in a somewhat general opinion that the board will need to change its methods or go out of existence.

The Association of the Middle States and Maryland thus far seems content to allow the College Entrance Certificate Board, of which it is the mother, to determine, through its system of examinations, the standards for the association.

The North Central Association of Colleges and Secondary Schools and the Association of Colleges and Preparatory Schools of the Southern States have practically the same standards and methods of operation; hence a brief description of the standards and system of accrediting high schools followed by the North Central Association will serve in the

main for both organizations. The standards for high schools belonging to the North Central Association are as follows:

1. That the minimum scholastic attainment of all teachers in a high school shall be the equivalent of graduation from a college belonging to the North Central Association including special training in the subject they teach, such requirements not to be retroactive.

2. Daily periods for any teacher not to exceed five. No school will be considered whose teachers teach more than six periods per day.

3. Laboratory and library facilities must be adequate for efficient instruction.

4. Inspectors shall take account in addition to the above the *esprit de corps*, the efficiency of instruction, acquired habits of thought and study, intellectual and ethical tone of the school. To be favorably considered a school must rank high in all of these.

5. Standard ratio of teachers to pupils is 1 to 25.

6. Schools on the borderline of points are not recommended for accreditation.

7. Schools of less than 5 teachers are not eligible.

(1) The organ of communication between the commission and the secondary schools is as follows:

First, the inspector of schools of the state university where such exists.

Second, the inspector of the state department or

Third, where neither of these exist then some one may be designated by the secretary of the accrediting committee.

(2) The report is first made to the state authority and by him transmitted to the Secretary of the Commission.

(3) The Commission on Accreditation has power to specify, by way of recommendation, the outlines of work which should be followed in the high schools. Considerable work has been done along these lines, units having been prepared in English, mathematics, history, Latin, Greek, German, French, Spanish, Physics, Botany, Commercial subjects, and manual training.

(4) The Board of Inspectors consists of the inspectors in each state. They meet annually and make recommendations to the accrediting committee, and this committee in turn makes its recommendations to the North Central Association where final action is taken. In 1910 the Board of Inspectors reported a great increase in the demand for industrial work in the high schools, and expressed alarm at the tendency of high schools to ignore, in the selection of their teachers of these subjects, the qualification standards approved by the

association. They urged that the colleges belonging to the association establish at once teachers courses in music, art, manual training, domestic science, etc. The report was approved, and now the association favors introducing the so-called industrial subjects, where local conditions render such introduction feasible; but the inspector will hold that a sufficient number of qualified teachers must be added to provide adequately for such instruction.

Warnings are sent out by both the North Central and Southern associations to schools that have fallen below standard. These warnings, in the case of the North Central Association, are sent out by the Board of Inspectors which consists of the inspectors of the entire territory. These warnings are based upon the report of the inspector from each state, but the fact that they are sent out by the entire Board of Inspectors makes them far more powerful and significant to school officers and communities. Under this plan few communities or school men can afford to ignore the mandates of the inspector of the association. If one could convince himself that the inspector for his state is all-wise in educational matters and that the path marked out by the association standards is the path all those seeking an education must travel, then he could throw his hat in the air and "go down the line" for the plan, for it is one admirably devised to take the educational affairs of the people from them and place these affairs in the hands of educational experts, who solemnly sit in judgment on a school a thousand miles away, which they have never seen and about whose intricate problems of administration they can know little if anything. But when he is in doubt about the "expertness" of the experts, and when he fears that the path marked out by the association is not the path which all can or must follow if they would become educated, then indeed is he perplexed. To express such a fear may lead to educational ostracism, but an increasing number of men are taking these chances today, because they see in these associations a tendency to centralize our educational affairs and place them in the hands of a self-appointed authority, over which neither state nor nation can exercise any control.

The map on page 398 will indicate the territory in which each of these voluntary educational associations is active.

A study of the origin and activities of these voluntary education associations reveals some interesting facts. It seems that:

1. They have been originated at the instance of men in secondary and college educational work. The former have

1. Territory of the Association of Colleges and Preparatory Schools of the Middle States and Maryland. 5 States.
2. Territory of the New England College Certificate Board. 6 States.
3. Territory covered by the North Central Association of Colleges and Secondary Schools. 16 States.
4. Territory covered by the Association of Colleges and Preparatory Schools of the Southern States. 13 States.
5. Unorganized Territory.

been even more active in the initial steps of organization than the latter.

2. Whatever their original purposes may have been they very quickly assumed more or less positive direction of secondary education in the territory comprehended in each.

3. This control and direction first took the form of college entrance examining boards, commissions or committees. The work of these committees was soon supplemented by the creation of accrediting committees or commissions with their elaborate systems of inspection and approval.

4. There is a marked similarity in their standards of accreditation. So true is this that one may say with considerable assurance that their educational standards, on paper at least, are the same.

That these organizations have served and are serving a good purpose in education cannot be doubted by any one familiar with the facts. The large question is, however, whether the good they do will compensate for their evil deeds and tendencies?

They tend to increase educational equipment and academic training of teachers in our high schools, but do they do this at the expense of local initiative and at the expense of real professional standards?

They tend to hold the attention of high school teachers to the traditional high school subjects, but do they do this at the expense of community and life subjects?

Their tendency is undoubtedly toward a national standardization of secondary education as well as college and university education. Is this desirable? Is it contrary to our notions of government?

Have we already begun to revolt? Does not the action of some of our states and institutions to which reference will be made later, together with a very general feeling that we have too much supervision from the top, indicate such a spirit among us?

These associations make detailed outlines of courses to be pursued in the high schools; thus they relieve the high school principal and his teachers from much of the necessity of considering the method and material of instruction in these schools; but in doing this have they taken from these teachers duties and responsibilities necessary to their own growth and development in their chosen profession?

They center the thought of the secondary and college teachers upon the subject matter of instruction, but do they thereby crowd out the disposition to study the needs of boys and girls in their relationship to this subject matter?

They tend to compel the high schools to regard themselves and to be regarded as preparatory schools, and thus lay these schools open to the charge of being the "pampered pets" of the colleges for which they "fit." Can an institution so regard itself or be regarded and reach the greatest development of which it is capable?

Concerning some of the other items the writer has not come to any definite conclusions, but upon this last point he has the very positive conviction that no school can reach its greatest possibilities to serve the people who attend it or who support it when it regards itself as a preparatory school for a higher one. This is true of the kindergarten, the elementary school, the high school or the college.

The Effect of the Work of the Voluntary Educational Association and of College Entrance Requirements on the High Schools of the United States

Believing that the men and women working under or directly observing a system in action can best judge of its merits or demerits, we have made an effort to find out from them what the effect of college entrance requirements and the activities of the voluntary education associations has been on educational practices and efforts as they have observed it.

To this end the following questions were sent, with proper modifications in the third question, to practically all the high school principals whose schools are on the accredited lists of The North Central Association of Colleges and Secondary Schools and of The New England Certificate Board:

1. What changes, if any, would you make in your course of study if the colleges accepted your graduates, who presented the required number of units, without specifying the subjects in which these units are to be earned?
2. A few colleges and a number of normal schools and Teachers Colleges are accepting graduates of high schools on the basis indicated in No. 1 above. Would you favor such an attitude on the part of all colleges?
3. In what ways have the college entrance requirements of the colleges of your state or the work of the North Central Association affected your high school?

Space will not permit a full report of the answers received to these questions, but a classification and summary of the answers may prove interesting:

402 or about 32% of the letters sent out were answered. Practically the same ratio of answers to letters sent out came from each territory.

An analysis and tabulation of the answers to the first question show that

1. 231 or about 60% would make changes in their courses of study under the conditions named in question (1).
2. 156 or about 40% would make no changes.
3. 48 or 12% would make changes in science, most of which would tend to make the subject less formal or elective.
4. 57 or 14% would make changes in mathematics, most of which would be to make the subject elective.
5. 16 or 4% would make minor changes in history.
6. 28 or 7% mention changes in English, most of which would tend to make this subject less formal and more practical.
7. 59 or 15% would make changes in foreign language requirements, most of which would be to make such courses elective.
8. 74 or 18% would increase their industrial work. Most of these would introduce or expand courses in domestic science, manual training, agriculture, stenography and typewriting.
9. 75 or 18% do not mention any particular subjects, but speak of general adjustments, most of which would tend to adapt the courses to the needs of pupils.

There is evidence that East and West there is a desire among high school principals for greater freedom to make

adjustments in their high school courses, so that they might more effectively meet the needs of individuals and communities; and further, there is evidence that entrance requirements interfere materially with such efforts. On the other hand there is not much evidence in the foregoing to support the idea that such freedom would result in chaos in the high school courses of study.

To summarize the answers to the second question:

11 or about 3% did not answer the question.
148 or about 37% answer the question "No."
243 or about 60% answer it "Yes."

Comparing the same items in the two territories:

1. *The Certificate Board Territory*

4 or about 3% did not answer the question.
57 or about 40% answered the question "No."
81 or about 57% answered the question "Yes."

2. *The North Central Territory*

7 or about 3% did not answer the question.
91 or about 36% answered it "No."
162 or about 61% answered it "Yes."

There is a striking similarity of opinion on this question among high school principals, east and west, if one may take the above as a criterion. It would seem that almost two-thirds of the principals in the North Central territory believe in complete freedom for their schools, and that only a slightly smaller percentage of the New England principals agree with them. That there is a strong minority who hold an opposite view cannot, however, be ignored.

Summarizing the answers to the third or last question:

From the Certificate Board's Territory

1. 13 or about 10% of those answering from this territory do not answer this question.
2. 22 or about 15% say the influence of the Board has been negligible.
3. 50 or about 35% say the influence of the Board on their schools has been good.
4. 57 or about 40% say the influence has been bad.

From the North Central Territory

1. 8 or about 3% of those answering from this territory do not answer the question.

2. 52 or about 20% think the influence on their schools has been negligible.

3. 128 or about 49% are inclined to approve the work of the Association and the influence of entrance requirements.

4. 72 or about 28% are adversely critical.

A summary of the combined results of the answers to the third question show:

21 or about 5% not answering the question.

74 or about 18% saying the influence has been negligible.

178 or about 44% approving the association and entrance requirements.

129 or about 33% adversely critizing both.

We regret that space will not permit us to quote the many opinions expressed on the issues raised by these questions. We cannot refrain, however, from quoting one opinion, which though unique in expression, is typical of a very large number of opinions of high school principals, East and West, who expressed themselves on the third question which, it will be recalled, related to the effect that college entrance requirements have upon the high schools.

"Deadened, formalized, mummified, our work in embalming everything into 'units.' Witness the ghastly 'pedagogization' of manual training the country over." Principal F. L. Sims, South Bend, Ind.; 54 teachers in the high school.

The Logan County High School at Sterling, Colorado, was recently refused admission to the accredited list of the North Central Association. The reason for this is given in the following quotation from a letter received from the present principal, J. A. Sexson.

"In the case of our high school the North Central Association attempted to dictate to the School Committee the subject matter to be embodied in the curriculum. As a basis for this dictation they seemed to be guided by the traditional college standards and they refused steadfastly to permit the consideration of teachers or subject matter that in any respect failed to meet certain standards preconceived as necessary. They went so far as . . . to threaten to penalize the school committee should they employ a principal who was personally distasteful to the examiner. They especially opposed the introduction of such subjects as blacksmithing, agriculture, household arts. . . . In other words, they opposed any attempts to widen the field of service of the school even though this was to be done at no special detriment to the traditional subjects."

It should be said that the School Committee of this school refused to listen to the demands of the examiner, elected the principal to whom objection was made, and allowed him to organize the school and make of it a school which any col-

lege, university, or association would be glad to recognize as first class. Thus far, however, the school has refused to be put on any of their accredited lists, though the principal and school committee have been repeatedly urged to fill out the necessary blanks.

In order to get the view point of others than high school principals on the matter in hand, the following questions were sent to all State Superintendents of Public Instruction and Normal School Presidents in the United States:

1. "If you have observed any of the so-called college or university domination of high schools in your state, in what form does it find expression?" Under this question were others that referred to the matter of employing teachers, method of accrediting high schools, conflicts between entrance requirements and community interests, and to the giving of examinations for determining college entrance.

2. "It is generally believed that it is in the small high school where the college entrance requirements are in most frequent conflict with community subjects. What, in your judgment, should be the solution to the problem presented in these small high schools?"

Fifty-five normal school presidents replied and thirty-six State Superintendents or representatives of these officials. Thirty-eight of the normal school presidents have observed what they consider "domination" of varying degrees; sixteen have made no such observations and one was indefinite in his answer. Nine State Superintendents have observed what they consider "domination"; twenty-three have made no such observations, and four were indefinite in their answers.

In answering the second question, "What, in your judgment, should be the solution to the problem presented in the small high schools?" we have considered that they are really stating whether they think the college should adjust itself to the high school or the high school to the college. The question then might have been, Should the college adjust itself to the high school? Putting it this way we find that of the fifty-five normal school presidents thirty-two answer the question "Yes", none answer it "No"; four say there are no conflicts between community and college entrance subjects in their states; twelve are indefinite and seven do not answer the question. Of the thirty-six State Superintendents or their representatives, fifteen answer it "Yes"; three answer it "No"; seven say there are no conflicts; seven are indefinite; and four do not answer the question or rather state no opinion as to the solution of the problem.

The foregoing indicates that workers in the educational field generally admit the efficiency of college entrance requirements, in that they succeed in their purpose, which is to center the attention of high school teachers and pupils upon the subjects regarded by colleges as essential to proper preparation for college work. It is also evident that they generally concede that the voluntary educational associations are efficient, in that they secure for high schools better prepared teachers, at least from the standpoint of academic training; that they increase school equipment and tend to make the educative process uniform through the standardization of both matter and method in our secondary schools. Admitting all this, it is evident that many of our educators are seriously questioning this kind of "efficiency" and are of the opinion that we are purchasing this apparent progress at too great a price, when we must pay for it by closing our eyes to the individual differences in children, by handing over important phases of educational administration to self appointed authorities, whose intentions are of the best, but whose methods insidiously undermine the democratic structure of our educational system. If viewed from an angle that is too narrow, the doctrine of efficiency is a dangerous one in all fields of human endeavor, but it is particularly dangerous in the field of education. The question is, not only how efficient is the school now, but how efficient will it be a thousand years from now? We contend that that educational system, which is an outgrowth from the people, will develop, perhaps more slowly, but it will develop more surely and in the long run will be the most efficient.

Views of College and University Presidents on the Subject

Beginning in July, 1915, the New York Times asked a number of college presidents to give their opinions on methods of teaching, courses of study, and topics that had been too much or too little emphasized in the past in the preparatory schools of the United States. Some interesting replies were received.

In the issue for July 13, 1915, President Hall of Clark University expressed himself as follows:

"The thing most needed now is the complete emancipation of high and preparatory schools from college prescription, which in the beginning of it did good but has lately become, in the East, almost an unmitigated curse. The high school should be the people's college and say to the higher institutions: 'Here are our graduates. We have done our best to teach them what their stage of life most needs.'"

In the issue for July 25, 1915, the following college and university presidents expressed opinions:

President Nicholas Murray Butler, Columbia University:

"It is best not to use the words preparatory school at all or get into the habit of thinking which the use of that term implies. The secondary school should not be merely a preparatory school but should stand upon its own feet and do the work appropriate to the age of its students and to the environment in which they live."

President Frost of Berea College, Kentucky, says that the problem presented in the small high school is a "burning question today." He is inclined to think the college should "clear the way for entrance for the boy who has graduated from a small high school and has not had a full list of studies ordinarily required for college preparation."

President Aley of the University of Maine:

"Institutions of higher learning need to go further than they have in adjusting their work to the preparation that the high schools give. It should be as easy to pass from the high school to the college as it is to pass from the grammar school to the high school."

President Hughes of Miami University, Ohio, thinks we should select those "subjects which are worth while and real and which will function somewhat in the life of the student" and then give these in "a way which will demand thorough preparation and first-class drill" on the part of the pupils of the high school.

Under date of Aug. 1, 1915, is the following:

President Blaisdell of Alma College, Michigan:

"Any regular four-year high-school course should be accepted as giving adequate training for college work. The colleges are rapidly coming to this position. The high school should insist on it. Many a lad receives his first impulse after three years in high school. Shall he be compelled to study an additional year or two before he will be admitted to college merely because he has not taken a 'college preparatory course?' Educational nonsense! It is mental training not information, that should admit to college."

President Cole of Wheaton College, Norton, Massachusetts:

"My sympathies are with the plan that will give the preparatory school a larger freedom, if this can be done, as I believe it can without any sacrifice, but with some improvement in the quality of scholarship and in the preparation for college work. The first step must come from the college. The college might further broaden the scope of the preparatory work it will accept, and still leave entrance into college more difficult than entrance into the Holy City, the latter having many avenues of approach, on the east three gates, on the north three gates, on the south three gates, and on the west three gates."

Under date of August 18, 1915, the following:

President Hill of the University of Missouri:

"As for the content of instruction in secondary schools that should be determined largely, if not wholly, by consideration as to what is best for a pupil of high-school age, regardless of whether he will attend university or not. Youth is the humanistic age and languages, human institutions, practical (not technical) science, and mathematics of a kind that helps to accurate solution of the concrete problems of life should constitute the major part of his study. Not information, not the covering of ground in these studies, should be the aim, but insight, appreciation, subjects studied to the future needs of students. In place of so much mathematics for girls, let the courses substitute an equivalent in home science."

President Pateat of Furman University, Greenville, S. C.:

"In my judgment there is going to be a widespread reaction against the unit system of entrance requirements."

President Brannon of the University of Idaho:

"The preparatory school of to-day must be characterized by courses which provide for vocational training as well as for discipline and culture. I think in too many high schools there is too much emphasis placed upon Latin and other foreign languages."

Under date of Sept. 26, 1915, the following:

Professor Lange, Director School of Education, University of California:

"If the 'preparatory' school is to advance, it must largely cease to be preparatory and must, instead, become an educational institution conscious of its self-hood as a social organ and functioning, self-directed as the needs of adolescence and of the nation's demands."

This contribution of the Times is stimulating to those who are advocating the emancipation of the high school. It very clearly shows that within the colleges and universities themselves there are differences of opinion as to the amount of freedom which should be given to the high school. From educational literature one is led to believe that the conservative and liberal opinions are held by two distinct groups in the college world. The conservative position is upheld by the Deans of colleges, supported by a group of specialists who have taught themselves to believe, and believe sincerely, that no man can be considered educated who does not possess at least some of the information which they as specialists possess. The liberal opinion, as a rule, is held by the college and university president earnestly supported by the heads of the schools of education. This of course is only an impression gained from current educational literature, but it is believed that a statistical study would verify the assumption.

Some Movements which Tend to Make the High School an Independent Educational Institution

In addition to the large amount of educational literature on this subject, most of which is antagonistic to the ideas of those institutions and organizations which would make of the high school a college preparatory school, there have been some recent actions in educational circles which indicate more serious opposition to the purposes of such institutions and organizations.

Dartmouth College recently withdrew its membership in the College Entrance Certificate Board. The reason for this action is given in a letter from Dean Craven Laycock under date of January 4, 1916:

"I will state as fully as possible the reason why Dartmouth withdrew from the New England Board.

"Because of the fact that schools in New Hampshire were removed from the list of the Board, thus making it impossible for Dartmouth to accept students therefrom, even though all the students sent to Dartmouth from such schools had been satisfactory. Situated as we are in New Hampshire and feeling a special obligation to the good schools of the state, we felt that we were limited by our membership in the Board in such a way that we could not carry out what seemed to be desirable policies in this regard.

"Dartmouth expressed her desire to remain as a member of the Board, provided freedom could be had in the point above mentioned. Naturally, of course, this could not be granted and the withdrawal from the Board followed."

"(Signed) Craven Laycock."

This action is significant, especially so when it is recalled that Dartmouth was originally one of the most vigorous advocates of the Certificate Board.

The University of Maine withdrew from the New England Certificate Board in 1913. When asked for the reasons for the action President Aley wrote under date of November 27, 1915, "The University of Maine withdrew from the New England College Entrance Board because it felt that a state supported institution should not have the entrance of students determined by a Board having no connection with the state."

In his official report for 1914 Superintendent Payson Smith of Maine, now Commissioner of Education for Massachusetts, after making some general observations on methods of regulating college entrance requirements, says, "Such dissatisfaction as has now arisen in relation to the New England College Entrance Certificate Board is due in part to the following:

1. "It attaches to the school possessing the certificate a fictitious value."

2. "The undue stress laid by smaller schools on college preparation in order that Board approval may be secured or retained."

3. "The indirect effect on many small schools that cannot consistently apply for or might be eligible for, the privileges accorded by the Board."

4. "The judgment of the school solely on the basis of the result in college."

5. "The colleges of this Board, while indirectly responsible for the effects of its activities on lower schools, are without accountability to the public for those results."

Commissioner Smith discusses each of the above items at some length and sets forth, what seems to us, some very sound educational principles. Under item three he notes the tendency of young people to go from their local high school to an accredited school of the Board for their last year of high school work. Thus the local school, in which the first three years of the student's work was done, gets no credit for this, but on the contrary it becomes an object of suspicion on the part of the people of the community, as being a school that is not as efficient as the accredited school to which the pupil goes for his final year, merely to avoid the necessity of taking a college entrance examination. He asserts that Maine cannot afford to thus cripple her small high schools. We believe that if Maine cannot afford to do this, much less can the nation afford to do it. And yet this is the inevitable tendency wherever the standards of these voluntary educational associations are dominant. The North Central Association refuses to accredit a school that has less than five teachers. We are told by Professor Jessup that 60% of the high schools in the North Central's territory have fewer than one hundred pupils, which would mean, in most cases, less than five teachers;[3] and by Dr. E. L. Thorndike that more than 50% of the high school children of the United States are in high schools of less than five teachers.[4] These facts are extremely significant to those interested in building up a spirit of loyalty in the rural and village communities.

Under the heading, "What if anything is the University of Wisconsin undertaking that the state as a whole does not wish it to do?" the Survey Committee, headed by Dr. W. H. Allen of the Bureau of Municipal Research, says: "High school inspection for the purpose of accrediting high schools should give way to high school visiting for the purpose of helping the university to keep in touch with state needs

[3] School Review 1915, Vol. 23, p. 623.
[4] Educational Review, 1907, Vol. 33, pp. 245-255.

. . . ", and further, "That compulsory foreign language requirements (which in effect compel thousands in high schools to take languages for the sake of the few who go to the university), should be discontinued both for entrance and for graduation."[5]

The Board of Public Affairs, in its comments on the above recommendations, when presenting its report to the Wisconsin legislature, says: "High schools have other functions than that of merely preparing graduates for entrance to the university. A majority of those who leave high school go directly into some business or other occupation; only a small minority of high school graduates enter the university or take other college work. Therefore, in the opinion of this board, the curriculum of each high school should be adapted to the needs of the students in its community. The fact that a given subject is of practical value does not divest it of its cultural advantages nor detract from its usefulness as a vehicle for disciplinary training. There is no necessary antagonism between the two values. University inspection for the sole purpose of improving the quality of instruction in the subjects each community decides to place in its high school is helpful and should be continued." And further, "In the opinion of this board a State university should provide regular courses leading to graduation and degrees without foreign languages of any kind. The value of foreign language training is not questioned. Neither does this board undervalue the opportunity offered for opening to the student rich stores of literature, science, and art. The question is as to whether a state university shall lead through reason and persuasion or through force."[6]

A very significant movement was started in New York city when in 1910 the High School Teachers Association declared that "The conviction is spreading throughout the United States that our high schools are seriously handicapped by present college entrance requirements."

A committee from this organization formulated two principles or methods of college entrance which would be satisfactory to the Association:

1. "By the first method college entrance would be based upon the simple fact of graduation from a four-year course in a first-class high school. This method would give complete satisfaction to the high school, if supplemented by competent examination into the efficiency of each school, we believe this method would tend to develop within the high school that independence, breadth, and judgment required to

[5] Survey of the University of Wisconsin, 1914, pp. 158-9.
[6] Ibid., pp. 31-2.

produce the best results. The improvement in the high schools would result in better preparation and more students for the colleges.

The second method calls for:

(a) The reduction in the number of so-called required subjects, together with

(b) The recognition of all standard subjects, as electives."

"The requirement of two foreign languages from every student is regarded as particularly objectionable."[7]

Just how much freedom such a plan would give to the high school would of course depend upon the bases of the "examination into the efficiency of each school," and upon the definition of "standard subjects," as well as upon who did the examining and standardizing.

In 1910 the Secondary Department of the National Educational Association adopted the following resolutions:

Whereas, a wide range of high school subjects is now demanded in view of the varied needs of society and the diversified interests of different students, and

Whereas, Manual training, commercial branches, music, household science and art, agriculture, etc., when once taught and thoroughly learned are worthy of, and justly entitled to, recognition in college entrance credits, and whereas colleges in certain parts of the United States continue to require two foreign languages from every applicant regardless of his dominant interests, and

Whereas, this requirement in addition to such work in English, Mathematics, history and science as is essential to the high school course of every student precludes the possibility of giving adequate attention to these other subjects, therefore be it

Resolved, that it is the sense of the Secondary Department of the National Educational Association that the interests of high school students would be advanced by the reduction of the requirement in foreign language to one such language and the recognition as electives of all subjects well taught in the high school, and be it further

Resolved, that it is the sense of this Department that until such modification is made by the colleges, the high schools will be greatly hampered in their attempts to serve the best interests of boys and girls in the public high schools.

Practically the same resolutions were adopted by the Department of Manual Training and Art Education, and the Department of Business Education of the National Education Association at their meetings in July of 1910.

These resolutions were adopted in the secondary department with but one dissenting vote. As a result the committee of nine was appointed with Mr. Clarence D. Kingsley of Boston as chairman. This committee has done excellent work in the cause of greater freedom for our secondary schools.

[7] Articulation of High School and College, High School Teachers Association, New York City, 1910, pp. 4-5.

At a recent meeting the superintendents in Massachusetts, representing towns from 5,000 to 10,000 population, adopted a resolution vigorously advocating admission to college on the basis of "having completed fifteen units of high school work of the grade heretofore required for college certification." They also advocated a more comprehensive recognition of subject matter which would fulfill entrance requirements.

Inspection of high schools has been the cause of much bitter controversy in the west and middle west. In some states this opposition has expressed itself by a demand that inspection and accreditation of high schools be done by the State Department. The states of Ohio and Kansas have very recently, by act of the legislatures of these states, taken the power of inspection and accreditation out of the hands of their universities and placed it with the state departments.

The arguments for doing this in Kansas are given by State Supt. W. D. Ross in his annual report for 1913. These are representative of the arguments that are being used elsewhere to bring about similar changes:

"As a matter of fact the standardization of high schools for college entrance requirements, for certificating privileges, for state aid and for all other purposes should be under the control of the State Board of Education. And no other agency should be permitted to attempt it."

"The reasons for this are obvious. Such a plan would be more systematic, it would be more uniform, it would be more economical, it would be just and it would be more effective than any system of partial or divided supervision could possibly be."

It is noteworthy that many of the organized movements against too much interference with the affairs of the high school by the higher schools, have occurred within the last five or six years. It has taken the form (1) of protest, (2) of colleges severing relations with voluntary educational accrediting associations, and (3) of legislative action by the states. Of course the last two forms are of the greatest educational significance and are the natural outcome of the protests that have been so long and vigorously expressed in educational meetings, organizations and publications.

Some Possible Methods of Dealing with the Problem

There are at least four ways, as we see it, of dealing with this question of college entrance. First, to let the higher school continue to prescribe the secondary school courses through the entrance requirements. Second, to put college

entrance into the hands of a voluntary educational body such as the College Entrance Examination Board. Third, to transfer the power of accreditation to the state departments of education, and require public supported schools to admit students who are graduates of such approved high schools. And fourth, to leave the matter in the hands of the local authorities, the colleges and state departments assuming an advisory attitude toward the high schools.

We have already suggested reasons for not continuing or extending the first method of dealing with the problem, but a summary and perhaps some addition to these reasons may be stated here.

1. Such a plan tends to over-emphasize subject matter and under-emphasize the effect of subject matter on the growing child.

2. Such a plan draws the curtain on the individuality of children. When a student asks his principal or high school teacher what subjects he should pursue in high school the reply is, "What college do you wish to enter?" and upon the answer to this question the student's high school course is based, rather than upon an inquiry into the child's adaptabilities, interests, or life ambitions beyond the college.

3. Such a plan tends to make the high school regard itself and be regarded by its patrons as a school that is subservient and subordinate to the higher school. No school can so regard itself and give the people who support it, or the children who attend it, the best services of which it is capable.

4. Such a plan tends to over-emphasize the future needs of the child and under-emphasize the "now" in his life. It is believed that the child that fully participates in the life and interests of the present is thereby made more capable of entering into the tasks of the future, whatever they may be.

5. Such a plan relieves the high school teacher, principal, and community of tasks of administration, the performance of which, we believe, is essential to a full measure of growth in their profession on the part of these teachers, and to a full measure of growth along the line of self-government on the part of the high school community.

6. Such a plan tends to sacrifice the interests and needs of the many who do not go to college for the supposed interests and needs of the few who do. This is especially true of the smaller high schools.

The second plan has all the objections of the first with the added one, which is best expressed in the already quoted statement from President Aley of the University of Maine: "The University of Maine withdrew from the New England College Entrance Board because it felt that a state supported

institution should not have the entrance of its students determined by a Board having no connection with the state."

The third plan, that of having state departments of education determine college entrance standards, is strongly advocated by some of the thoughtful educators in the country. That such a plan is or would be a complete solution, we presume, is not believed by all those who advocate it. But that it is much better than either plan one or two, is believed by all educators who think the people who support their schools should have a voice in their management. It may be said, of course, that state supported schools are quite as much under the direction of the people as state departments of education. This is true, theoretically, but practically state schools are, as a rule, less responsive to public demands than state departments of education. And herein lies, as many see it, one of the grave dangers of adopting the third plan, as some states have already done. This danger is that the exigencies of political parties may put into the offices of state superintendents those who do not have a broad conception of their work and by reason of this fact high schools as well as colleges may suffer at their hands. As we see it, this plan may have practically all the objections urged against it as the first plan. The courses that have been outlined for high schools by state departments, for the purposes of accreditation, show that they are quite as narrow as the college prescriptions, and indeed they give one the idea that college entrance standards have guided in the making of these courses. Principal W. D. Lewis makes a significant statement in this connection:

"Any attempt to extend the number of subjects or to change the scope of existing requirements for college entrance is met with suspicious scrutiny on the part of many colleges. Even the authority of the New York State Education Department is powerless to add or subtract one jot or tittle in the matter of college entrance units. By its dispensation of public money this department can dictate courses of study, the qualification of teachers, and the methods and scope of instruction in the high schools; but the necessity of having its credentials accepted for entrance has generally forced it meekly to follow college suggestion. Hence the Regents' examinations, by which the high school pupils of the state are measured, are really college entrance examinations in another form."[8]

The same kind of situation may arise where entrance is by certificate rather than by examination. Unless the state department remains free from the narrowing influences of the higher institutions it may become a more powerful agent for the destruction of high school independence than the college could possibly be.

[8] Democracy's High School, 1914, p. 86-7.

One of our correspondents furnishes an example of the miserable red tape which may be drawn around a high school by the rules of a state department that has the power to accredit high schools. Supt. E. L. Rickert of Connersville, Indiana, says: "The only restriction that really hurts us is the requirement in foreign language. We have pupils that ought not to do this. Foreign language and mathematics may be omitted by *special permission* of the State Board of Education for each pupil."

Such rules as these, while they may not be common, nevertheless are possible, and experience tends to show that they increase rather than decrease under a bureaucratic system into which the third plan of high school control tends to develop. We believe that it should not be adopted with too much assurance that it will solve our problem; and we are inclined to believe that it is better to suffer our present ills than to go over to a system fraught with so many harmful possibilities. In states where commissioners of education are appointed for an indefinite period the dangers may be lessened or they may be heightened, depending of course on the educational viewpoint of the commissioner.

The fourth plan, which is to allow the high schools complete freedom, the state departments and the higher schools assuming an attitude of helpful advice and coöperation toward these schools rather than an attitude of direction and prescription, is the one we would advocate.

Many of our educators in colleges and in high schools fear that such a policy would result in chaos in the work of the high schools. How much such a fear is founded on fact and how much on prejudice will have to be determined in each case. But we believe that there are some facts which indicate that this fear is ill founded.

In the first place a very large percentage of the principals and teachers in our secondary schools are college graduates whose prejudices are, for the most part, naturally in favor of the college standards, both in method and material of instruction.

As very convincing evidence of this fact we may again call attention to the replies from high school principals previously cited to the question, "What changes, if any, would you make in your course of study if colleges accepted your graduates, who presented the required number of units, without specifying the subjects in which these units are to be earned?" In this study it appears that 40% of these principals would make no changes in their courses, and that 60% would make changes, none of which can be construed as revolutionary or tending in the direction of chaos.

In the second place those institutions, whose entrance requirements have been most liberal, do not seem to find that students come to them with unwisely selected high school courses. It is true that some students come who do not have the usual college preparatory work, and it is also true that these frequently do well in their college work.

If the high school is to be free from the college, does this mean that they are to be absolutely divorced from each other, the one having nothing to do with the other? Far from it. Instead we would advocate a closer, a far closer, relationship than now exists. Not that relationship of servant and master which can never be close in the true coöperative sense, but the association of equals in the public service is the kind of association we believe is coming. Professor Kirkpatrick in his recent book, "Fundamentals of Sociology," has put the matter most clearly:

"The . . . supposition that the Central authorities can direct the affairs of each community better than the people of the community, is true only in an undemocratic country and where the people of the local communities are ignorant. In a monarchy such centralized control would be consistent, but in a republic, where each local community not only governs itself but takes a part in national and state government, it is quite inconsistent to suppose that they cannot manage their educational affairs. . . .

"This does not mean that the local community should be left entirely without help in solving its educational problems. On the contrary the central educational officials should furnish it with all possible information as to what may be done and as to the most successful means used in other communities. The central officials in education should be to the local school officials what the departments and schools of agriculture are to the farmers of the state. These institutions have no authority whatever over the farmer, but they furnish him reliable information as to what crops may be successfully grown in each kind of soil and how the planting and culture of a crop may be carried on most profitably. In a democracy the state educational officials should aid the local communities. This policy . . . will be far more effective than requiring all to come up to some fixed standard."[9]

President Sanford of Clark College expresses much the same view when he says:

"If there is to be any withdrawal on the part of the college it is only in the sense of getting out of the way and allowing the preparatory school to solve its own problems without unnecessary interference, with friendly, even anxious interest, if you like, with coöperation and advice—as mate with mate—but without undue insistance upon the college point of view; and especially without attempted dictation of any sort."[10]

To bring about this kind of helpful relationship between higher schools and secondary schools, or between state de-

[9] Kirkpatrick, Fundamentals of Sociology, p. 30-31.
[10] Education, 1913, Vol. 33, p. 281.

partments and secondary schools we believe two pet schemes of administration and so-called supervision of high schools must be done away with.

The first of these is that the high school inspector, as such, must go, and in his place must come the high school visitor whose function will be entirely advisory and who will have an equal interest in all the courses being offered by the high school, and the same interest in the boy or girl who must leave school at the close of the high school course, that he now has in those who are to continue their studies in college.

The second of these is that the accredited list, on its present basis, must go and in its place must come a standardization from within on a very much broader basis. Such has already been indicated, in part, by some of the requirements of the North Central Association and the Southern Association. But in a democracy these standards and many others, such as the ratio of high school attendance to the number in the community of high school age, the success of former pupils not only in college but in life, the number of strong, healthy, happy children graduated from or attending the high school, must be made the concern of the people who support the school. We believe such standardization can be best and most permanently brought about through education from within rather than from pressure without, such as is now being used, through the system of inspection and accreditation, to bring about a standardization much of which, we fear, tends to retard rather than advance true educational progress in the field of secondary education.

THE SOCIAL STATUS OF THE TEACHING PROFESSION[1]

By J. Howard Stoutemyer, Lincoln, Nebraska

Introduction: The Problem

Within the last decade there has arisen wide dissatisfaction with the ideals and methods of the schools and school masters. The parent has given vent to his discontent, and the press has given publicity to his out-cry. Civic agencies have initiated inquiries and oftentimes made over their educational organizations. The teachers are also dissatisfied for they are denied economic return commensurate with their expenditure in preparation and service, and are bound fast in the educational machine. The administrative heads, hearing the cries of criticism, have made many changes in their policies, and those most alive to the needs of the hour, call in efficiency experts to diagnose the evils and to propose proper remedies. "All these facts," asserts Professor Suzzallo, "are symptomatic of one underlying truth, that the teaching organization of our public schools is far from satisfactory either to its members or to its patrons, and that we are attempting by hit-and-miss methods to reconstruct the profession of public education. . . . I believe, therefore, that there is no more important question before us than that of the reorganization of the teaching profession." (19 p. 363.)[2]

In America, teaching does not receive social recognition equivalent to that given many other pursuits in life, which require less preparation, less exaction in health and energy, and which give less than teaching in service and sacrifice in behalf of youth and commonwealth. A part of the blame lies with those teachers who enter the ranks unprepared, greedy for the dollar, who lack forethought and professional interest. Thus we have many epigrammatic statements such as the following: "As the teacher, so is the school," "School

[1] Although a considerable body of literature has appeared subsequent to the collection of the above data, yet it is thought that since this is a type study, the general conclusion will remain unchanged, namely, that the social status of the teacher varies directly with the professional training and fitness on the part of the teacher, and adequate return in salary and social esteem on the part of the state.

[2] Numbers refer to bibliography at the conclusion of this paper.

reform means schoolmaster reform." "In order to make our education great, we must make our educators great."

On the other hand, society has neither stimulated the development of these qualities of greatness sufficiently nor recognized them adequately. History records few teachers who have had high praise for their inherent worth, or who have had their services properly recognized and richly rewarded. The usual comment is after this fashion: Emerson thus advised a friend: "Cobble stones, maul rails, pick up stones, plough, make hempen rope, hang yourself at the end of one of them, but don't teach school." When Walter Scott wished a reason for Rueben Butler's occasional error in judgment, he apologetically added: "for the man was a mortal and had been a school master." Longfellow longed to do creative work and loathed the classroom. "I'd rather live awhile on bread and water than to have my life crushed out by teaching." Carlyle says that "Whom the gods wish to make miserable, they first make school teachers of." Bernard Shaw asserts that "Those who can, do; those who cannot, teach."

McAndrews (10) found from his study of the causes of discontent among teachers, that they "are usually commiserated" and are patronizingly looked upon by the average American "who thinks a man would not be a teacher if he could do anything else." "Such of the public as know nothing about teaching regard it as an overpaid sinecure, while the more intelligent members of the community look upon it as an uncertain makeshift, to be taken up only by the man moving on to higher things, or by the woman watching and waiting for her true estate: a husband, a home and family." "The men teachers are pinched with small pay and discouraged by the insecurity of the tenure. The schoolmasters of the cities are slaves to political influence that stunts and paralyzes manliness, while those in the rural communities as to their acts, their speech and their very souls, are the common property of the rural demagogue who wields the power of school trustee." Young men fresh from college take a school to keep the pot boiling while they prepare for something else." "The men in the schools, are not contented for they are leaving all the time for business, for law, for medicine, for preaching, because these occupations bring more respect and are freer from absurd and petty exactions in the matter of mechanical uniformity and routine." For many teaching is still a menial and a hireling occupation, and dismissal, however merited, means a permanent injury. "Teaching is the only business over which the state has monopoly." A lawyer or architect dismissed by the board may open up a shop

again in the same vicinity without let or hindrance. Thus insecurity of tenure, insufficient remuneration, lack of freedom from political influences and restraints, and the want of social recognition are powerful factors in the present attitude of men towards teaching as a profession.

A. The Bearing of History on the Solution of the Problem

The solution of our problem lies in understanding what it is and how it came to be what it is. Both of these issues take us back into the history of education and especially the history of the teaching function for materials and method.

When one realizes the exalted place that wisdom held in the thought of the Hebrew people, he can appreciate the importance attached to the office of imparting instruction and the one who instilled wisdom. "A sage is superior to the king of Israel, for if the sage dies, we can hardly find one like him, but if the king died, every Israelite is fit for the position." "He who teaches the son of his friend knowledge will sometime be seated in the heavenly college of wisdom, and he who teaches the son of an ignorant man will have power to nullify even the decrees of the Almighty." "You should revere the teacher even more than your father. The latter brought you into the world; the former indicates the way into the next." The teachers received high esteem for they were closely related to the religious interests of the people "and were largely looked upon as the mouthpieces of Jehovah."

Wherever teaching remained undifferentiated from the priestly function as among the Ancient Egyptians, the Hindoos, or in the Middle Ages, the teaching class was given a similar social esteem which that society had attached to the priestly class. The social status was due to the religious connections rather than to the merits of the teaching class *per se*.

In the days of Athens' glory, the teacher's status was relatively low and the job of getting right teachers for boys was not always taken seriously. Thus Socrates asked his fellow townsman this memorable question: "Callias, if your two sons were foals or calves, there would be no difficulty in finding some one to put over them; we should hire a trainer of horses or a farmer, probably, who would improve and perfect them in their own proper virtue and excellence; but as they are human beings whom do you think of putting over them?" As Laurie puts it, "the day-school master did not take a high position. Demosthenes taunted his great rival with having to help his father clean out the school when he

was a boy, and evidently regards the work of a primary teacher as a very humble one indeed. 'As a boy,' he says, 'you were reared in abject poverty, waiting on your father in school, grinding the ink, sponging the benches, sweeping the room, doing the duty of a menial rather than that of a freeman's son.' There was no public qualification for the office of school master, and hence chiefly, the low social status. It was the refuge of the distressed. There was a proverbial saying applied to a man who had disappeared: "He is either dead or become a primary schoolmaster." Lucien, long after the palmy days of Athenian education, condemns tyrants sent to the nether world to become beggars or primary schoolmasters. Dionysius the tyrant taught an elementary school at Corinth, and this is mentioned as an illustration of how low a man might fall." (9 p. 277.)

In the earlier Roman periods, the teacher was not held in honor, for they were Greek captives and slaves, and hence the status was low. In the case of Crates of Mallos, who was the first grammar teacher in Rome "It came about in this wise: Having had the misfortune of falling into a sewer, thus breaking his leg, he was thus considered thenceforth good for nothing but to be a teacher." "Nero caused one Paetus Thrasea to put to death for no other reason than that he had a sour cast of countenance, and looked like a school teacher." Horace heaped an immortality of contempt upon Orbilius the most famous teacher of his time. (10, p. 3187.)

The following account from Juvenal illustrates the relative value of the teacher and other household expenditures.

"Just inquire what Chyogonus receives, or Pollio (rhetorical teachers) for teaching these fine gentlemen, and going into all the details of Theodorus' (a famous rhetorician) treatise.

"The baths will cost six hundred sestertia, and the colonnade still more, in which the great man rides whenever it rains. Is he to wait, forsooth, for weather? or bespatter his horses with fresh mud? Nay, far better here! for here the mule's hoof shines unsullied. On the other side must rise a spacious dining-room, supported on stately columns of Numidian marble, and catch the cool sun. However much the house may have cost, he will have besides an artiste who can arrange his table scientifically; another, who can season made dishes. Yet amid all this lavish expenditure two poor sestertia will be ample remuneration for Quintilian. Nothing will cost father less than his son's education.

"Then where did Quintilian get the money for so many, estates?—Quintilian was indeed lucky, but he is a greater rarity than a white crow. But many a man has repented of

this fruitless and barren employment, as the sad end of Thracymachus proves (pupil of Plato and Isocrates, a teacher at Athens, who meeting with no success hanged himself) and that of Secundus Carrinas (a teacher driven by poverty from Athens and Rome). And you, too, Athens, were witness to the poverty of him on whom you had the heart to bestow nothing save the hemlock that chilled his life blood!" But do your parents, impose severe exaction on him that is to teach your boys; that he be perfect in the rules of grammar for each word read all the histories, know all the authors as well as his own finger ends. . . . Require of him that he be the reverend father of the company, and check every approach to immorality.

It is no light task to keep watch over so many boyish hands, so many twinkling eyes. 'This' says the father, 'be the object of your care'—and when the years come around again, 'Receive for your pay as much gold as the people demand for the victorious charioteer!'" (The charioteer would receive as much for an hour's drive as the teacher would for an entire year's work. (12, p. 418-9.)

It was only in the latter part of the Roman period where a few municipalities or the government subsidized and thus controlled the schools, that any sort of public system of education arose. "This was accomplished in various ways,—by contributing to school support, paying the salaries of certain teachers or granting them special privileges and distinctions, or offering scholarships to a given number of pupils. Thus Julius Caesar granted the franchise to all foreign teachers already in Rome and offered it to any others who should come; and Augustus, in banishing foreigners from Rome made an exception in favor of teachers. Vespasian, however, established the first real endowment of education by paying salaries of one hundred sestertia ($4,000) from the Imperial treasury to each Greek rhetorician in Rome. . . . Thruout the second century, this policy was continued, especially by Hadrian; extended by Antonius Pius to the provinces; and enlarged by Marcus Aurelius who, in addition granted a public salary to two rhetoricians and two teachers of philosophy in each of the four schools in Athens. . . ." (7, p. 265.) Besides paying these salaries, Antonius Pius granted exemption to teachers from aedelships, priestships, jury service, municipal and imperial army service, paying of army training masters and the support of soldiers. "The basis on which immunity was granted to teachers was that, in exercising their profession, they were already serving the state; a double service could not be required of them." (20, p. 167.) Constantine showed his interest by promulgating three de-

crees increasing the privileges of teachers "to the end that those engaged in teaching may with more ease instruct many in the arts and sciences." (20, p. 165.) Gratian induced each of the seventeen capitals to share equally with the government in the payment of salaries of their grammarians and rhetoricians. The status of the successful sophist was high and his advent to a city was the occasion of great rejoicing for he often performed great service in the direction of the civil or foreign policies of the cities. The salaries varied with the time and place but unusual teachers were made the recipients of lavish gifts, as in the case of Herodes who gave Polemo $45,000 as a token of his esteem. Hence Walden remarked, "Teaching in the palmy days of sophistry seems to have been a not unprofitable profession." (20, p. 184.)

After the decline of the Empire and after state aid and control were removed, the schools again fell into disrepute and the teacher was given a low social status. In the early Modern Period, teachers served as city clerks, choristers, or other pursuits to eke out a precarious pittance. These teachers were sometimes expelled monks, dissipated wandering scholars, or vagabonds with but a mere smattering of the three R's. In his "Anatomy of Wit" (1579) John Lyly describes the qualifications of the existing school masters. "If among all his servants he shall espy any without wit, or void of honesty, either unthrift, or a wittal, him he sets not as a surveyor and overseer of his manors, but a supervisor of his children's conditions and manners, to him he committeth ye guiding and tuitions of his sons, which is by his proper nature a slave, a knave by condition, a beast in behavior." (18, p. 30.) Erasmus complained that "no one is so abandoned, so useless, so insignificant that the common people do not think him fit to conduct a school." Frederick the Second of Prussia appointed his non-commissioned officers as teachers in the lower schools, even tho dissolute, confirmed drunkards, crippled and broken in health, for they needed shelter during the winter months, and such employment kept them out of mischief and saved a pension; besides, their military training would maintain order and discipline in the school room. It had come to such a pass that any detachable member of society without a job for the time being was permitted to assume the obligations of a school master.

The following citations show that early American teachers also occupied a very humble place in the community. As late as 1725 the Rev. George Ross of Newcastle, Delaware, wrote that "there are some private schools within my districts which are put very often into the hands of those who are brought into the country and sold for servants. Some

school masters are hired by the year, by a knot of families who, in their turn, entertain him monthly, and the poor man lives in their homes like one that begged an alms more than like a person in credit and authority. When a ship arrives in the river it is a common expression with those who stand in need of an instructor for their children, *Let us go and buy a schoolmaster.* The truth is, the office and character of such a person is generally very mean and contemptible here, and it cannot be otherwise 'till the public take the education of children into their mature consideration." (3, p. 58.) Likewise Jonathan Barclay, Rector of Annapolis, Maryland, bears witness in 1678 that there must have been quite a market for teachers for he records that "not a ship arrives with either redemptionists or convicts in which school masters are not regularly advertised for sale, as weavers, tailors or other trades with little other difference that I can hear of except perhaps that the former do not usually fetch as good prices as the latter." (3, p. 65.)

A new England Town Book listed the following duties of the teacher:

"1 To act as court Messenger. 2 To serve summons. 3 To conduct certain ceremonial services of the church (usually as reader and chorister). 4 To lead the Sunday School. 5 To ring the bell for public worship. 6 To dig graves. 7 To take charge of the school. 8 To take charge of occasional duties." Kilpatrick in "The Dutch Schools of America" cites a number of instances of a similar nature. Thus the early American teacher eked out a precarious existence by performing multifarious duties other than teaching, some of which were in ill-repute, for "teaching was still in the household stage as an industry." The American teacher has since been given legal authority, but no official standing, and his social status depends more upon his personal qualities and fitness than upon the legal recognition of his calling.

Nearly three-quarters of a century ago, Horace Mann decried the low esteem in which the school master was held and the scarcity of good recruits. "Now I think we have an abundant reason to believe that a sufficient number of persons, bearing from the hand of nature the distinct image and superscription of a school teacher, are born into the world each generation. But the misfortune is, that when they arrive at the years of discretion, and begin to survey the various fields of labor that lie open before them, they find that the noblest of them all, and the one, too, for which they have the greatest predilection, is neither honored by distinction, nor rewarded by emoluments. . . . If they go thru the whole country and question every man, they cannot find a

single school teacher who has acquired wealth by the longest and most devoted life of labor . . . nor one who has been elected or appointed to fill any distinguished civil station. . . . Nor does the social estimation accorded to teachers much surpass the pecuniary value set upon their services. The nature of their calling, debars them almost universally from political honors" and they cannot win fame from business. "No worldly prizes are held up for it and in the present condition of mankind, how few there are who work exclusively for the immortal reward." Those with a mechanical turn of mind go into industry; those with special gifts find their places in medicine, ministry or law. Few engage in it for its own sake; the majority make it subservient to some ulterior end preparatory to some other station in life. "The profession of schoolkeeping has never had an equal chance with its competitors; on the one hand, it has been resorted to by a great number whose only object was to make a little money out of it and then abandon it; and on the other hand, its true disciples, those who might have been and should have been its leaders and priesthood have been lured and seduced away from it by all the more splendid prizes of life." (11, p. 183.)

These illustrations show that the professional status of the teacher varies in proportion to state control, professional fitness and remuneration commensurate with that of other professions. In commenting on the position of the teacher in Ancient Education, Lauries states: "It is only when the state takes up education as a national concern that teachers receive proper remuneration, and only when they are professionally trained that they have any status whatsoever." (9, p. 277f.) In the present day, the principles herein stated are embodied in the educational systems of France and Prussia, where professional fitness and state direction have resulted in a high social status for the teaching profession. We may now examine the means by which France has developed the social status of her teaching population.

B. The Social Status of the Teacher in France

In France, teaching is recognized as one of the learned professions. He who would teach, even before active preparation begins, understands that it is to be his life work. The strenuous competition for entrance compels the entrant to count well his purposes and to risk his all in the endeavor to get in. When once he has passed into the profession, there is no bidding or encouragement to make it a stepping stone to some other pursuit in life. In looking over the lists of men in the first rank, one is struck with the fact that these

men are well along in life which means that they have served long in their profession, that they are men of experience and maturity, and have developed some philosophy of life to enable them to wisely guide their pupils.

Then, too, teaching is a closed profession. The entrances are closely guarded so that those who enter must fulfill certain definite requirements in preparation. The teachers in the Primary Schools must have completed these schools, and have taken professional training in their normal school. Since teaching is a permanent profession the exact number of teachers for the following years is computed and only that number may pass the examination for entrance to the normals. The first part of this examination consists in tracing his pedigree, his aptitudes, and attitude towards teaching, and then at the normal there is a week of examinations on subject matter. After completing the three years of training, the teacher is sent out for two years of experience as an apprentice teacher, upon the completion of which he may present himself for another examination to become a permanent teacher.

In the secondary system the competition is even more severe. He must have completed the secondary school, and pass an exacting examination for entrance to the training school. Upon completing his training, he may become a *repetiteur* in a lycée or a college, or if he is a doctor of philosophy, he may receive a university appointment. The *agrégation* examination is the only pass to a professorship in a lycée. The mortality at these examinations is very great, for any one over 27 years of age may compete. Thus men fresh from the university, or men of long experience, or those oftimes unsuccessful, are all competing for the degree.

In the third place, the French teacher is a state official. His appointment, tenure and payment are all determined by the state; the local authorities have nothing to do with the matter. "When a beginner is seeking a post, he places himself at the disposal of the Minister. If he be agrégé, a post must be given him. If he be only licencié, he may have to wait or take temporarily an inferior post. When a vacancy occurs, the Minister sends a man to fill the post. The master chosen may refuse three posts if they do not suit him. The headmaster must accept the one sent. In order to remedy any inconveniences, every member of the staff has, every November, to state in writing whether he wishes to stay in his present post or to be removed. The headmaster and the Academy Inspector give opinion on each request and may suggest removal." (15, p. 27.) The headmaster, if disagreement arises, can prefer charges of inefficiency, immorality, etc., but the office is so securely hedged about that he usually

lets them go; the most that he does is to delay promotion. While this may lead to insubordination and injustice, it is more than compensated for by the security of the office which enables the teacher to give full attention to his work.

Salary is dependent not on geographical location or political preferment, but on the class. In the secondary system there are six classes and promotion is from the sixth up to the first. To prevent injustice in promotion, the maximum time is 29 years tho a brilliant teacher receiving promotion annually might attain the highest class in 19 years. The rapidity of promotion is largely determined by the amount of funds available for increased salaries. Promotions are made in a definite order, some by seniority and others by selection on the basis of special merit. A certain portion must be of the senior members of that class, but the remainder may be promoted by the inspectors on the recommendation of their proviseurs. Promotion from the first rank in the secondary schools may be to a proviseurship, or a university post, or to be an inspector or rector of an academy.

In the primary system a similar system is in vogue. The import of this provision is at once apparent. A large number come from the peasant class with no other ambition than to return to their own village where family ties and local traditions are binding them. If one remains a teacher, he does not thereby sacrifice his rise in his profession, or increase in salary, for he is a state officer, hired and paid by the state and not by the community, and his promotion and salary depend not on locality or politics but on his rank in his profession. With exception of Paris the same salary attends the same class thruout France, which precludes bidding for position, and the consequent domination of the larger community over the smaller one. In order that a teacher might live befitting his position, in towns above a thousand inhabitants, the teacher has a certain indemnity for his house and maintenance. Not only are good teachers well provided for, but there can be no interference such as exists under local or district control. "The humblest teacher in the most out-of-way hamlet, acting as it were as the pioneer of new ideas and new traditions, often in the midst of open indifference or covert hostility feels that he has got a whole ministry behind his back just as the lonely sentinel feels that he has in his rear an army of his friends." (17, Vol. 7, p. 35.)

In France every state official is entitled to a pension after his allotted term is served. The teacher comes in for his share, not as a recipient of charity, but as a right with other state officers. The fund is made up of a fifth of the salary, and one-twelfth of the first salary and each subsequent in-

crease thereafter. After thirty years of service, the teacher is eligible to his pension; under certain conditions, where injury or loss of health is incurred during service, he is eligible even earlier.

The French educational system has recognized the value of an expert at the head of each division with an advisory council to assist him. Strange as it may seem, the average teacher has much more say as to school policies in the French system, highly centralized tho it is, than is conferred upon the rank and file of teachers in democratic America. The greater number of the national advisory board are his peers elected from his own number, and his representatives sit in the local and departmental councils. In each department a council composed of educational officers and teachers consider the educational problems of that field. Every year, the teacher is expected to write a paper on some educational theme or problem in which he is interested. Such work keeps the teacher alive and out of ruts, and enables the council to keep tab on the pulse of the profession. In practice the Inspectors, both Primary and Secondary, not only give advice freely to teachers, but as freely receive it; indeed, as one author puts it, they usually ask the teacher's advice and seldom act otherwise.

As the teachers in the Lycée have only twelve to sixteen hours per week, they may do tutoring outside, or do extra teaching with additional pay. Every encouragement is given to increase their scholarship, and thus many are working for higher degrees at the university. Those most worthy may receive rewards of merit and honors. For the most efficient in each 300 teachers, there is given a silver medal, for each 120, a bronze medal, and for each 80 there is honorable mention. A limited number of the silver medalists may receive the *palms d' officer d' academic*, and after five years this recipient may attain the honor of *officer d' instructor publique*. As teaching is just as much a profession as law or medicine, or the army, the teacher receives public esteem equal to the rank of any public official.

For additional evidence on the solution of our problem we may examine the Prussian teacher's status.

C. The Status of the Teacher in Prussia

Prussia was the first of the great nations to realize the significance of a thoroly organized educational system and more than three score years ago took active measures to perfect its teaching profession. Since so many features are of interest to our present American situation, the letter written in 1854 by Mr. Kay, an Englishman long familiar with

the Prussian progress, is quoted at length. "How essential is it then to the moral welfare and therefore to the political greatness of a nation, that the profession of the teacher should be one, inspiring the perfect satisfaction of its members, and commanding the respect of the country!

"The teacher's station in society ought to be an honorable one, or few learned and able men will be found willing to remain long in the profession, even if any such men can be induced to enter it; and it is much better to be without teachers, altogether, than to leave the training of our children to men of narrow minds, unrestrained passions, or meagre intelligence. The Prussian government has fully recognized these truths, and has therefore done all within its power to raise the character and social position of the teachers as much as possible. As these efforts have been heartily seconded by the provincial governments and the people, the result has been most remarkable and satisfactory.

"The first exertions of the government were wholly devoted to the improvement of the intellectual and moral character of the profession, and to the increase of its numbers. They determined to make the name of "teacher" an honor, and in itself a guarantee to every parent of the character and attainments of the man who bore it. To attain this end, they denied all access to the ranks of the profession to any but those who proved themselves worthy of admittance. . . . The ranks of the profession are open to all educated and moral men, wherever or however they were educated, but educated and moral they must prove themselves. . . .

"This once attained, the next great effort of the government was directed to the improvement of the social position of the teachers. The government placed them under the immediate protection of the county courts. They also made a law that no teacher who had once been elected, whether by a parochial committee or by trustees or private parents, should be dismissed except by permission of the county magistrate. This protected the teachers from the effects of mere personal prejudice of those in immediate connection with them.

"The teachers of Prussia are men respected by the whole community; men, to whom all classes owe the first rudiments of their education and men in whose welfare and good character and respectability, both the government and the people feel themselves deeply interested. In birth, early recollections, and associations, they are often peasants; but in education and position they are *gentlemen* in every sense of that term, and acknowledged officers of the county government. . . . This profession offers a means by which an intelligent peasant may hope to raise himself into the highest rank of society,

as the expenses of preparing for admission into the profession are borne by the government. But as the number of candidates for admission is consequently always large, the government takes every possible precaution, that only such shall be chosen as are in every respect qualified to reflect honor upon the profession and carry out its objects in the most effective manner, and so well satisfied are the teachers with their position that although their pay is often but poor yet it rarely happens that any one quits his profession to seek another situation. They are contented with their profession, even when it affords only a bare living, as it always confers a station of respectability and honor, in direct communication with the provincial government." (2, pp. 169, 171.) The reasons which induced the government to render the teachers independent of the local influences were: first, the teachers would lose the feeling of independence and thus fail in the full discharge of their office; and second, the teachers are a learned body and are better qualified to judge of the efficiency of instruction than other people; "but if these persons who have never studied pedagogy could interfere with them, . . . the teachers would often be obliged to pursue some ridiculous, inefficient method, merely to please the whims of persons not experienced in school management, and the enlightenment of the people would thus often be considerably retarded." (2, pp. 174-5.)

The preparation of the elementary teacher, especially for the Volksschulen, while not as severe as for the higher schools, requires the completion of certain prerequisites. He must have completed the lower school and the preparatory school previous to entrance to the normal school. He must furnish with his application for entrance to the preparatory school "a certification of baptism, health and vaccination endorsed by a state recognised physician, and reports on general school work and conduct." (8, p. 31.) He is examined on his knowledge of religion and school subjects and his ability to use good German. In this school he continues the courses begun in the elementary school. In the normal school, he gets a thoro training in German, a foreign language, either French or English, and mathematics. He receives instruction in psychology, pedagogy, history of his profession and methods, and continuous drill in lesson planning and practice work. When his course is completed, the student takes his first teacher's examination before the government commission which permits only the probation service. During this probation period, appointment is terminable on notice, the only instance in Prussian educational practice. Permanent appointment comes only after the passing of a second

examination, "which may be passed not less than two and not more than five years after the first" and "aims to discover the ability of the candidate to hold a school appointment." For admission to the examination the report of his district inspector must show his ability to successfully hold a school position. The examination consists of an essay on an educational subject, then the presentation of a lesson to a class on a topic assigned one day in advance; and an oral examination covering the pedagogical studies, and some or all of the subjects of the elementary curriculum. (8, p. 79.) After fulfilling these requirements the candidate is eligible for appointment. "On receiving his appointment, the teacher is ceremoniously introduced to the school and colleagues by the district or local school inspector. Considerable importance is attached to the ceremony of introduction. In no case will its omission be disregarded. It is incompatible with the position of the teacher and the significance of his official position in the school and the community to omit the ceremony." (8, p. 89.) When once appointed, the teacher cannot be dismissed except for grave misconduct and inefficiency. If perchance there is a misfit, the teacher may be transferred to another school. The patrons can do nothing towards securing his dismissal; the inspector can warn and impose a small fine, but it is only the state officials who are qualified to discharge him. "The teacher is a servant of the state and local interference would be regarded as an interference with the rights of the state." (8, p. 90.) The teaching profession has been safeguarded by the thoro training and examination before the permanent appointment of the candidate, but thereafter the teacher is safeguarded in the free pursuance of the duties of his office.

The prospective teacher in the Higher Schools of Prussia must have completed the course of study in these schools, and the university. Even before leaving the higher schools the prospective teacher is pretty certain that he will enter the teaching profession and also has chosen the particular subjects that he will teach. Neither scholarly distinction nor university degrees will qualify for teaching except as they assist in passing the *Staats-Examen,* which often requires a year of study beyond the university. This examination intends to test the attainments of the candidate in (1) pedagogy and philosophy, including psychology, logic and ethics, (2) the mastery of the German language and literature, (3) the understanding of the doctrines of his religion, and (4) special proficiency in the subjects which he will teach. The examination in the philosophical subjects is intended to test the breadth of knowledge and a co-ordinated and compre-

hensive view of the principles underlying educational theories. The examination in religion aims to prevent atheists and socialists from entering the ranks, and it is to be noted that few Jews, however well qualified, find entrance to the profession. The candidate must show a mastery of his native language and literature. The crux of the examination, however, is the subjects to be taught which are arranged in two groups: the language and history group, and the science-mathematics group. Every candidate is examined in four subjects, the first two being majors, and the second two minors. In order to secure the best combination, the two majors and at least one of the minors must be in the same group. Passing this examination means that he can teach only those subjects in which he has qualified and in the class determined by the grade of his certificate. There are three grades of certificates, which correspond to the three divisions of the secondary schools, the lower, the middle, and upper. The first grade certificate qualifies for any of the three divisions; the second grade for the two lower; the third only for the lowest division.

Accompanying his application must be his own life history and that of his parents, and his educational credentials must show precisely what he has been doing from the time he entered the higher school up until the examination. He must also make known his election of subjects, his majors and minors, and the grade of examination he desires in each. The written examination consists of essays on topics in philosophy, pedagogy or psychology, and an essay in each of his subjects. He is allowed sixteen weeks, and when he has finished, he must affirm that he has received no assistance other than the authorities listed in his bibliography. After due examination of these documents, the commission sets a day for oral examination which aims to test his ability to express his knowledge of philosophy and special subjects, and his personal fitness for the teaching profession. After passing this examination, he must pursue his special preparation, which consists of a year in the Seminar or training school attached to a higher school, and a year in practice teaching, the Probejahr. In the Seminar he studies the workings of the school, such as hygiene, administration, observation and preparation of lessons, and does some practice teaching under the supervision of the teacher in charge. When the year is up, if the candidate has shown ability in teaching and co-operation with the school, the Director makes a full report to the Provincial School Board, and he is advanced on to the Probejahr. The candidate is assigned to a school where he does six or eight hours' teaching per week, and when it is

satisfactorily completed, the Director reports to the Board and the candidate's name is inscribed on the list of teachers eligible for appointment.

In state schools the teacher is appointed by the Provincial Collegium while the town councils appoint teachers for the municipal schools subject to the approval of the state officials. As in the case of the elementary teacher, the local patrons cannot in any wise interfere with the teacher's discharge of his office. "Cases of dismissal are exceedingly rare in Germany. Every precaution has been taken to see that a teacher is a fit and proper person for his post before he is appointed. Reports are made on every candidate during his university career, during his training and probation and during his service as Hilfslehrer. If a head master wished for any reason to get rid of an assistant, he would communicate with the governing body immediately above him. An inquiry would be held, and the teacher would appear to defend himself. But if anything should occur to warrant a teacher's dismissal from the profession, he would certainly be given the option of resigning." (15, p. 260.)

In addition to his salary, which increases according to length of service, the teacher has a substantial rent indemnity. The rent allowance is granted to enable a master to reside in a dwelling befitting his status as a high civil servant or municipal magistrate. The amount granted varies according to the estimated annual cost of such residence in the town where he is employed. After ten years of service, Oberlehrer in state and municipal schools are entitled to a pension in case of being incapacitated for work in school. In Prussia, "years of service" include the year of military service, the seminar year, and year of probation and the time above four years as Hilfslehrer, and a $200 rent allowance is added to the last salary. The pension allowances are: after ten years of service, 25% of last salary; after 25 years' service, 50% of last salary; after 40 years' service, 75% of last salary. Widows may receive 40% of the pension which the husband was receiving or was entitled to receive at his death. Each child receives one-fifth of the allowance of the mother, but in no case should the total exceed the pension which the husband and father would have received.

Teachers in the state or municipal schools have the standing of civil servants who have completed a definite amount of work in training, who have been appointed by state officers, and who follow a definite career with titles to express the duties and positions filled. Russell states: "Special privileges are granted to teachers in accordance with their rank. All state officials of Prussia are carefully classified and the

gradation is punctiliously observed on all state occasions. The ordinary higher-school teachers belong to the fifth class; directors and professors of twelve years' service belong to the fourth class; and occasionally the crown honors a very old man who is distinguished as a teacher and director with the privilege of the third class and the title of *Geheimer Regierungs-Rat.* Provincial school inspectors and ministerial counselors, being administrative officers, are ranked by themselves in higher classes." (16, p. 376.) The assertion is made in the book on "Conditions of Service of Teachers" that the only profession in Prussia that can be definitely compared with that of the teacher is that of the "Richter," which combines the functions of magistrate and judge. In academic training the judge has a little longer probation and training, and is a little older when he enters upon his duties, and therefore receives a slightly larger remuneration, but in point of advancement the two are similar.

The high qualifications required of the members of the teaching profession in Prussia, in physical and moral fitness, in breadth of academic scholarship and professional training, prevents the unfit from entering the ranks; but when once within the profession, the teacher's course is attractive, with security of tenure, freedom of teaching, a comfortable living wage, a pension when disabled and the high social status of a government official. Prussia has made the school the key to unlock the gates of national welfare and fortune, and, consequently, esteems the schoolmaster for his great national service.

D. The Status of the American Teacher

From the foregoing illustrations, we may infer that, when there is no high academic and professional qualification required for admission into the ranks of the teaching body, the abundant supply of unfit teachers reduces the standard of teaching efficiency to the lowest terms, and hence gives a very humble social status to the teacher. When the state requires a relatively high qualification in professional preparedness, and gives in return security of tenure and a sufficiency of remuneration, a relatively high social status is a natural consequent. Here then we may see the source of the lack of social repute of the American teacher and the cause of his dissatisfaction. In the first place the teacher is not professionally trained, and inefficient tests of teaching ability grant the right to teach; then, too, there is a lack of maturity and experience, frequent shifts and a lack of state support and control.

From recent reports of the Commissioner of Educa-

tion, one may find such statements as these: the supply of trained teachers is entirely inadequate to meet the demand, and thousands of places must be filled by half-trained and untrained teachers. In general, only one in five positions have available a trained graduate, and in many districts not more than one in ten. In some regions the average education is not more than the seventh grade, and in a number of the states a large proportion of the teachers have less than a four-year high school course. For instance, West Virginia has 43.6% in this class and less than 16% normal or college graduates; Tennessee has 63% with less than a four-year high school course and only 12% normal or college graduates. Since the term of service is four years or less in the rural schools, there are needed annually 92,000 teachers, of whom less than one per cent have had definite training for the work they are undertaking. These beginners are intelligent, resourceful and conscientious, and their only real fault is that they lack educational preparation, teaching and life experience, all of which most of them will get in time by experimenting on their pupils, the most part of whom, however, do not survive the experiment. The American educational policy has been to permit the novice to begin with the least possible training and experience, whereas the Continental policy has required high qualifications.

The recent awakening on the rural life problems has developed several score of training schools for rural teachers and many more which offer courses leading to the understanding of farm problems. Only as the administrative and supervising machinery of the rural schools develops, removing control from men unacquainted with the fundamental principles of rural school management, and biased by local politics, can there arise a professional teaching attitude in our rural schools. When a mode of salaries is installed which rewards ability and experience instead of locality or politics, then and only then can the smaller communities hope to have as efficient teachers as the larger city systems. Since our American notion of democracy and competition fosters the bidding for efficient teachers by administrators who can pay more, village and rural communities become practice fields and dumping grounds for the cities. Salaries increase according to size of city rather than according to preparation or experience. Equal pay for equal work in whatever vale or hamlet would go a long, long way towards the prevention of the frequent shifts in the teaching body.

The lack of permanency permeates our whole educational system. This is true even in our state departments. In many states the superintendent is nothing more than a political

officer and changes as rapidly as the wolf-catcher. Oftentimes the make-up of the members of the State board of education are ex-officio, or appointed on political grounds, or for short periods of tenure. The city boards are in a constant flux, and certainly the smaller units are even more unstable. The superintendents of our cities have a median tenure of three years or less. The tenure ot teachers in the secondary schools of the North Central Association is two years or less. The tenure in the rural schools is two years or less of 140 days each, or less than a calendar year. It is probable that 75 per cent of the rural teachers and 50 per cent of the town teachers shift their positions annually. The wonder grows that our educational system is as effective as it is, when there is so little continuity in office, and hence no chance to mature adequate plans and policies and certainly no opportunity to perfect them.

In contrast to continental practice, our teaching body is immature in life and teaching experience. In Prussia, few teachers are prepared for a permanent post before they are 25 years of age and not infrequently before 30. In his study of rural school teachers in the United States, Foght found that in seven states the average age of the teachers when beginning was 18 years or less, and the average for the entire country was 19.2 years when beginning. The average of the rural school teacher is 26 years, which means that the rural teacher is still immature in life experience. In the study of Danish schools (6) Foght found that 50 per cent of the women teachers are 30 years old or older, and 50 per cent of the men are 40 years old or older. This means that their teachers have had time to develop their own philosophy of life and have had sufficient experience with life's problems to wisely direct their pupils.

The proverbial American attitude has been that anybody could do anything at any time without any definite preparation to do that thing. We have not taken education seriously as a national concern. We expend as much on clothes as on education, twice as much for tobacco and chewing gum as for education, and many times more for drink and crime than for education. In a number of states more is expended for the care of the wards of the state than for the education of free independent citizens. "Whatever complaints we may make of the dominance of the dollar in American life, the incontestible fact exists that the public that pays out three-fourths of its taxes for protection of life and property, willingly, pays out one-fourth for public education grudgingly." Germany, France, Denmark, Japan,—all have seen their wonderful national possibilities realized thru an ably directed and

supported school system with a professionally trained and stable teaching profession.

The next significant move must be the cessation of easy filtration into the teaching body, and the stopping of the leakage from the ranks. It must be made worth while to get in, and less worth while to get out. Our mode of certification of teachers must in some wise test the ability and preparation of the teacher. With the exception of California the largest part of the certification is by the passage of some kind of examination. The usual type tests the ability to cram rather than the traits of the efficient teacher. France and Prussia embody both the training and examination of the candidate. After the candidate has completed his training he comes up for his examination which covers the native fitness, training, and the ability to control and teach a class in an assigned subject before an expert commission. Certification on the fitness of the teacher in mind and body for the teacher's office, and the ability to control and instruct a class in a schoolroom is worth infinitely more than a cram test of books dealing with the subject of class instruction and management.

There is a need of revision in the appointment and promotion of teachers. The old district system with its board of local directors with no other qualification for choosing teachers than their local interest in education stands at the extreme of inefficiency and shortsightedness. The opposite tendency is towards a civil service regime which removes appointment from politics, local prejudice or personal favor, and recognizes training and merit as prerequisites. Custom, and in a few states, legal enactments, require the annual election of the teacher which involves a tremendous and unnecessary expenditure of energy both by teacher and the board. Such a procedure is detrimental to the best interests of the schools, and drives the most efficient teachers from the profession, for teachers alone of all those employed in pursuits requiring special training and skill, must annually run the chance of dismissal. On the other hand, without adequate selection of the fit at the entrance to the profession, it would not be possible to make tenure permanent. Even civil service rules must provide rules for some means of eliminating the unfit, and of humanely disposing of those professionally dead. It would be better to adopt a common sense business plan of continuance in office during efficient service. Cubberley asserts that "the whole burden now rests on the teacher when the whole burden of dismissal should rest on the board. The teacher's continuance in office ought to be assumed unless the board is willing to take the responsibility of notifying the teacher in writing, with reasons, that the board desires to

terminate the contract at the close of any school year. . . . Such a change would shift the burden of continuance of employment from the teacher to the board where it should rest, and would practically give life tenure to every competent teacher, at the same time leaving the board free to discontinue the services of incompetent, unprogressive teachers. . . . Such a change in the school laws of the various states would practically solve the difficulties now met with all over the country, without inflicting life tenure on any community. Such a proposal would naturally meet with the opposition of many of the school boards, because it would compel them to justify their actions more fully than they now need to do and it probably would be opposed by some teachers now living under life tenure because it would demand keeping alive and efficient as a condition of retention." (13, Vol. 5, p. 56.)

When the various attachments to the teacher's salary in France or Prussia are taken into account, it appears that the American elementary school teacher is underpaid during the period of service, and unpaid after the period of service has passed. Ayres states that "the wages received by school teachers constitute a measure of two things: first, the quality of the ability of the teacher; second, the value the community puts upon the teacher's service. The fact that teacher's wages are lower than those paid any other sort of service means that as a nation we place a low valuation on the teacher's work." (1, p. 23.) Münsterberg asserts that "there was never before a nation that gave the education of the young into the hands of the lowest bidder." Since three-fourths of those engaged in teaching are women who can underbid men, Münsterberg warns us that we are placing a premium on the celibate spirit which Rome has done for ages, by hiring the female celibate and discriminating against the wife and mother. The most capable men are rapidly being driven out of the profession either by lack of remuneration, or else by greater attractions in other lines of business. Since teachers' salaries have increased but slightly in comparison with the rise in the cost of living, and since society demands much from teachers in the way of standards of living, appearances, and public duties, the compensation in salary is but a precarious pittance.

Even when teachers remain in the profession, their period of service is short in comparison with many other fields of labor. The public demands young and vigorous teachers and those past prime have difficulty in securing locations equal to their ability. "Teachers wear out young and are relegated to the scrap heap" at a time when other professional groups are entering their most productive periods. Retention in of-

fice during competency and good behavior does not solve all of the problems of educational efficiency. Retention beyond the period of physical fitness and teaching capacity, "however much it appears to be the desert of the poorly paid and unpensioned teacher, can only be viewed as a public calamity when the defenseless children are taken into account." It is practically impossible for teachers partially incapacitated, or growing less efficient, to find positions without the loss of self-respect or the infliction of an immeasurable harm upon growing children. The teaching profession should have some humane and satisfactory methods of retiring those incapable of rendering the required grade of work. The teachers who are active and efficient should have the sense of security and the opportunity for an undivided service in their profession. The stability of the profession will largely depend on the development of a state and an inter-state system of pensions. This will tend to attract a more efficient class of teachers and will be a greater incentive to remain in the service and grow in professional capacity. The retirement allowances and pensions are relatively new innovations in this country, yet according to Prosser, twenty-three states have more or less legislation bearing upon pensions for teachers, and nineteen cities support various types of ventures for superannuated teachers. "More than thirty-five per cent of our population enjoy the educational benefits to be derived from such funds, while thirty per cent of the entire teaching force of the public schools of the United States have opportunity to protect themselves against one or more of the five great risks of life." (14, p. 5.)

In addition to the foregoing factors for the attainment of a better social status for the teacher, there should be developed a more closely co-ordinated unity of thought and purpose within the profession itself. This could be accomplished in part by the development of a higher general educational attitude in the teaching population and in the public opinion of the country as a whole. But to be effective and permanent, this sentiment should be embodied in an organization or institution. As Suzzallo has outlined the policy, there should be local units of great flexibility; these local units should constitute a state organization which should elect representatives to a national organization. This national organization should have an advisory committee and a paid secretary to guide the activities of the organization. In the annual conferences, there would be considered the general problems of public education, of matters of common policy and comity between states, of investigating, and disseminating professional information for the greater efficiency of educational practice.

This organization should also foster the growth of a professional spirit and pride in the individual members, and should enlarge the conception of significance of their mission.

E. Summary

In fine, the more important means then for the improvement of the social status of the teacher are: proper state certification of teachers and an interstate standard, based upon professional fitness and ability to teach; tenure during efficiency and good behavior, and promotion thru merit in teaching and development in the profession; compensation for the work done in whatever locality commensurate with the expense in time and energy in preparation, the rise in the cost of living, and in proportion to the service rendered to the state; a state and inter-state system of pensions in which the teacher and state, or states, conjointly contribute to the funds for the protection of the old age and incapacity of the teacher. In addition to these, public opinion should be educated to adequately evaluate the services of the teacher and render a corresponding social status; then, too, the individual members of the teaching population should develop permanent professional interests and attitudes, and a vital relationship with the fundamental problems of our civilization.

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BOOK NOTES

The greatest of literary problems; the authorship of the Shakespeare works. By JAMES PHINNEY BAXTER. Boston, Houghton, Mifflin Co., 1915. 686 p.

The author of this work, a distinguished scholar in history and antiquities, a man of large affairs and of experience in public life, has given us here the results of a labor of love which takes the Bacon-Shakespeare problem out into a larger light. The author has been familiar with Shakespeare from his boyhood, and during his long life has mastered all the relevant literature of the time, and not only presents the evidence in detail but gives a broad summing up which cannot fail to impress the candid and intelligent reader with the fear that after all the actual Shakespeare could never possibly have written these plays. It required a certain moral heroism as well as a sense of competent knowledge to take up a cause on which so much obloquy had been heaped, and to boldly challenge what was usually regarded as the consensus of the competent, for the *odium theologicum* has been hardly more bitter than that meted out to heretics in this field. Mr. Baxter's book is not merely a delight and a rich source of information but it is a book which it should be enjoined upon every student of Shakespeare as a duty to read.

The measurement of intelligence. An explanation of and a complete guide for the use of the Stanford revision and extension of the Binet-Simon intelligence scale. By LEWIS M. TERMAN. Boston, Houghton, Mifflin Co., 1916. 362 p.

This volume sets forth in simple language the great importance of a publication of careful measurements of intelligence in children. It describes the tests and the entire method of giving them. The facts are of far-reaching educational importance which it has cost many years and the labors of many men to establish. The work contains 20 chapters, 17 diagrams, and a list of selected references. The second part is of special interest because it follows the age of the child beginning at three and ending at fourteen, with two supplementary chapters on the average adult and the superior adult. This work is greatly needed and most timely, and the author's experience and ability qualify him to an unusual degree for his work.

The things men fight for. By H. H. POWERS. Chautauqua, N. Y. Chautauqua Press, 1916. 385 p.

Belgium, the land of art. By WILLIAM ELLIOT GRIFFIS. Chautauqua, N. Y. Chautauqua Press, 1916. 322 p.

The German Empire between two wars. By ROBERT H. FIFE. Chautauqua, N. Y. Chautauqua Press, 1916. 400 p.

France under the Republic. By JEAN CHARLEMAGNE BRACQ. Chautauqua, N. Y. Chautauqua Press, 1916. 373 p.

These four books are from the Chautauqua Press in its home reading series. All have a high degree of contemporary interest and bear more or less upon the war.

Powers says he wrote his book because "I could not help it." Perhaps he assumes that his readers cannot help reading it. There is no index of its twenty chapters which seems to us a strange oversight in a book of this character. It is, however, written by a competent man.

The same is eminently true of Griffis, who favors us with a Table of Contents of his thirty-one chapters. His ability to treat the subject is unquestioned and the book has given us a compend that is valuable as it is timely.

Fife shows us how no political development in the last half century has been so striking as the growth of the German Empire. The topic, however, is larger and although the author throws much light upon his subject it is much less satisfying than the two preceding volumes.

Bracq's book is in some respects the best in the series. The author had given early evidence of competence in this field and writes admirably and to the point.

Human physiology. By PERCY GOLDTHWAITE STILES. Philadelphia, W. B. Saunders, 1916. 405 p.

This book has only a modest scope, viz., to present concisely accepted facts with only a limited description of the experiments by which these have been established and avoiding for the most part unsettled questions. Such books must be written by those who have not lost the point of view of elementary students. The author's pages are not too much encumbered by bibliography and he has only 71 illustrations which seem to the writer to be well chosen.

Sex problems of man in health and disease. By MOSES SCHULTZ. Cincinnati, Stewart, Kidd Co., 1916. 168 p.

The scourge of the social evil and the new battle cry of social purity and the new crusade under the banner of Eugenics is the author's theme. He tells us first in six chapters something about sex in health; in three more he treats of disease. Then comes a longer treatment of venereal diseases, one after another; then come functional sex diseases, and finally syphilis. There are no illustrations.

The psychology of the Kaiser. By MORTON PRINCE. Boston, R. G. Badger, 1915. 112 p.

With the keen analytic eye of the psychoanalyst which long ago prompted him to treat Theodore Roosevelt as more or less psychotic, the author here characterizes the Kaiser, his antipathy, prerogatives, his delusion of divine right, the German autocracy and the army, the Kaiser's sentiments, especially those that are self-regarding, and also those of the German democracy, the real cause of the Kaiser's antipathy as an obsession and as a defense reaction, and finally the moral of his abhorrence of socialism.

England or Germany? By FRANK HARRIS. New York, Wilmarth Press, 1915. 187 p.

This book has a certain timely interest, but as soon as the issue of the war begins to be decided it would have little value. It has literary quality, but it seems to us both too popular and too partisan to be a work that would be long remembered. The author has the unique position of being a member of the Kansas bar and being pretty well known in the literary set in London.

Cupid's Cyclopedia. By OLIVER HERFORD and JOHN CECIL CLAY. New York, Scribner's Sons, 1910.

This quaint little book is witty and very effervescing in its reading quality, but utterly indescribable. Its definitions are perhaps the most clever, e. g., Altar, the forge where hearts are fused, from the word halter, to hitch. Adamant, a very hard word, see father. Rice, the confetti of matrimony.. Rose, the hardest working flower in love's garden. Sofa, a receptacle for spoons, etc.

How children learn to draw. By WALTER SARGENT and ELIZABETH MILLER. Boston, Ginn & Co., 1916. 264 p.

Some contributions to drawing tell what should be accomplished. Others describe methods and devices. This book, we are told, combines both views. The first chapter is on illustration of themes; the second, on the drawing of birds, plants and the human figure; third, constructed objects; fourth, standards and attainments; lastly, we are given certain conclusions as to how children learn to draw. It is amazing that in our day a book like this could be written, because it takes almost no account of the rich and voluminous experimental literature upon the subject.

Diet for children. By LOUISE E. HOGAN. Indianapolis, Bobbs Merrill Co., 1916. 160 p.

In this little volume we are told why people concerned should understand food principles. Then follow lists of nursery foods, foods that are forbidden, nursing and mother's food, menus for summer and winter, and diet in illness, antidotes for poisons, recipes for broths, soups, cereals, bread, muffins, vegetables, and desserts. On the whole it seems a meritorious book, sure to be helpful, but making no intention whatever of being scientific or what we would expect and hope for today from such a work.

The American plan of government. By CHARLES W. BACON, assisted by FRANKLIN S. MOORE. New York, Putnam's Sons, 1916. 474 p.

Part I deals with the making of the constitution. II. The nature of the preamble. III. The organization of the federal congress. IV. The legislative government in the United States. V. Limitations upon legislative government in the United States. VI. Executive government in the United States. VII. Judicial government. VIII. The federal compact.

Self-reliance. By DOROTHY CANFIELD FISHER. Indianapolis, Bobbs Merrill Co., 1916. 243 p.

This work has 17 chapters. Its scope cannot be better given than mentioning some of them: Self-help in early babyhood. After babyhood and before school age. Apartments and hotel conditions. Raw material. Robinson Crusoe instinct. Social self-reliance. The use of books. Making dreams come true. Allowances. Adolescent girls. An outdoor school.

The legacy of the Exposition. By CHARLES C. MOORE. San Francisco, Panama Pacific Intern. Exposition Company, 1916. 187 p.

The A B C of the government of the United States. By PERLEY MORSE. New York, Perley Morse Co., 1916. 85 p.

The winds of Boston and vicinity. By ALEXANDER MCADIE. Cambridge. Reprinted from the Annals of Harvard College Observatory, 1916. Vol. 73, Part 3, pp. 211-231.

The essential place of religion in education. Monograph published by the N. E. A. Ann Arbor, Michigan, January, 1916. 134 p.

Educational research in public schools. By DAVID S. HILL and MARY L. RAILEY. Ann. Rept. to the Supt. of Schools. Division of Edutional Research, New Orleans, 1915. 211 p.

In re Everychild, a minor, vs. lockstep schooling. A Suit in Equity. Edited by FREDERIC BURK. San Francisco State Normal School, Monograph C, California State Print. Office, 1915. 69 p.

Sogni indotti. Studio sperimentale sull' influenza degli stimoli acustici sul sogno. By GIOVANNI STEPANOW. Firenze, 1915. 59 p. Rep. from Psiche, Rivista di Studi Psicologici, 1915. Vol. 4, no. 3 and 4.

Status and value of music in education. By ROSE YONT. Lincoln, Nebraska, Woodruff Press, 1916. 355 p.

World peace and the college man. By DAVID STARR JORDAN. Philadelphia, University of Pennsylvania, 1916. 45 p.

Universities and public service. Proc. of the National Conference on Universities and Public Service. Edited by E. A. FITZPATRICK. Madison, Wisconsin, Cantwell Printing Co., 1914. 299 p.

La science Francaise. Exposition universelle et internationale de San Francisco. Paris, Ministère de l'Instruction Publique et des Beaux-arts, 1915. 2 vols.

Laboratory lessons in general science. By HERBERT BROWNELL. New York, Macmillan, 1916. 215 p.

Tacitus. Cornelii Taciti de vita Julii Agricolae, de origine et moribus Germanorum. Edited by J. H. SLEEMAN, Cambridge, Univ. Press, 1914. 211 p.

Elementary French reader. By LOUIS A. ROUX. New York, Macmillan, 1916. 150 p.

Problems involved in standardizing state normal schools. By CHARLES HUBBARD JUDD and SAMUEL CHESTER PARKER. Bureau of Education Bull., no. 12. Washington, Govt. Printing Office, 1916. 141 p.

America the wonderland. A patriotic festival. The Ethical Culture School, New York City. 51 p.

Industrial art at home and abroad. By JAMES PARTON HANEY. New York, Prang Co., n. d. 15 p.

Simple lessons in animal husbandry. I. Horses and cattle. II. Sheep and swine. By CHARLES SUMNER PLUMB. Dansville, N. Y., Owen Pub. Co. 28 p.